

The University of Sydney



**Faculty of  
Veterinary Science**

Handbook

1997-98

The University of Sydney  
 N.S.W. 2006  
 Telephone 9351 2222

University of Sydney Helpline: 1800 06 1995 (free call)

Semester and vacation dates 1997-98\*

Semester	Day	1997	1998
<b>First</b> Semester and lectures begin	Monday	3 March	2 March
Easter recess			
Last day of lectures	Thursday	27 March	9 April
Lectures resume			
Years I and III	Monday	7 April	20 April
Years II, IV and V	Monday	21 April	4 May
Study vacation -1 week beginning			
Years I-IV	Monday	16 June	15 June
Year V	Thursday	12 June	11 June
Examinations commence			
Years I-IV	Monday	23 June	22 June
Year V	Tuesday	17 June	16 June
<b>Second</b> Semester and lectures begin	Monday	28 July	'27 July
Mid-semester recess			
Last day of lectures			
Years I, II and III	Friday	19 September	18 September
Years IV and V	Friday	19 September	11 September
Lectures resume			
Years I, II and III	Tuesday	7 October	6 October
Years IV and V	Monday	13 October	6 October (Tues.)
Study vacation -1 week beginning	Monday	10 November	9 November
Examinations commence	Monday	17 November	16 November

There may be some variations to the above semester dates for some courses.

# Contents

Preface	iv
Message from the Dean	v
1 Staff	1
2 The Faculty of Veterinary Science	5
History of the Faculty	5
Membership of the Faculty	5
Student membership of the Faculty	6
3 Undergraduate degree requirements	7
Bachelor of Veterinary Science: BVSc	7
Bachelor of Science (Veterinary): BSc(Vet):	8
4 Courses of study: BVSc	11
First year	11
Second year	13
Third year	14
Fourth year	16
Fifth year	18
5 Other faculty information	23
Administration	23
General information and advice	23
International students	23
Special enrolment information	24
Regulations—discontinuation of enrolment	24
Restriction upon re-enrolment	25
Assessment and examinations	26
Libraries	27
Clubs and societies	27
Publications	27
Scholarships and prizes: undergraduate	28
Mathematics Learning Centre	29
Academic dress	29
6 Postgraduate study	30
Higher degrees and postgraduate diplomas	30
Postgraduate scholarships	32
7 University of Sydney (Camden)	34
8 Foundations	37
Postgraduate Foundation in Veterinary Science	37
Poultry and Dairy Research Foundations	37
J.D. Stewart Veterinary Science Foundation	37
Main Campus Map.	39

# Preface

## Getting the most from your Handbook

In this, the *Faculty of Veterinary Science Handbook*, you should find most of what you need to know about the Faculty.

The first four chapters will help you identify the people in your Faculty and determine the requirements for bachelor's degrees. They contain outlines of the **undergraduate** courses offered and lists of recommended books, as well as sources of further information. Chapter 5 provides specific information on enrolment and details of undergraduate scholarships and prizes.

Information on **postgraduate** degrees, diplomas and scholarships may be found in Chapter 6. Chapter 7 provides information on the University farms at Camden and on Nepean Hall, the University hall of residence. Chapter 8 describes the foundations of the Faculty.

Further information relating to the University generally may be found in the University's *Calendar, Vol. 1: Statutes and Regulations* and in the *University of Sydney Diary* (available free from the Student Centre or from University of Sydney Union outlets).

## Faculty Office

Room 218, J.D. Stewart Building

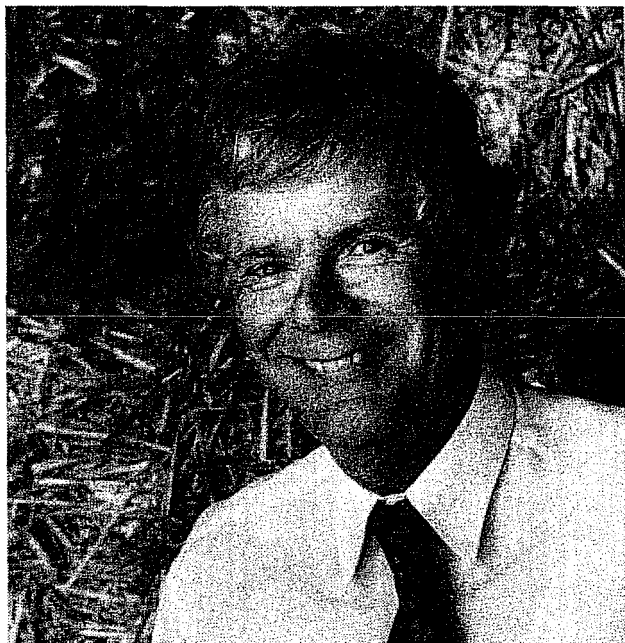
Contact the Faculty Office for questions or advice about:

- interpretation of by-laws and resolutions (i.e. the official rules and regulations),
- general administrative problems,
- variation of enrolment,
- extramural course work,
- University counselling services, and
- booklists and Faculty timetables.



*J.D. Stewart Building*

# Message from the Dean



During your time as an undergraduate, you may become very interested in some aspect of veterinary science. The Faculty provides an opportunity for students to interrupt their studies with a year of supervised research in a particular field, leading to the award of the BSc(Vet) degree. The requirements for this one-year research degree are also described in this handbook.

On behalf of all the staff I extend a very warm welcome to those entering the Faculty of Veterinary Science and wish you every success and enjoyment in your studies

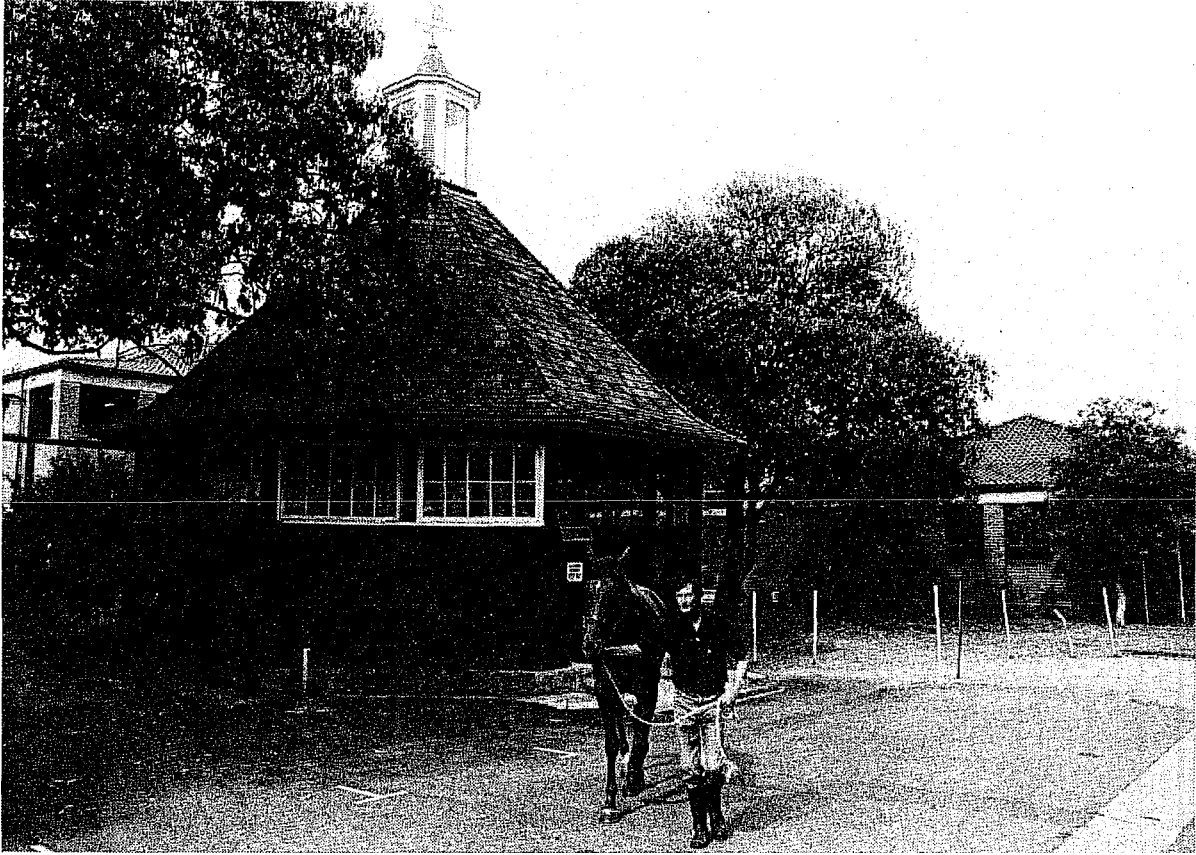
A handwritten signature in black ink, which appears to read "D.R. Fraser". The signature is written in a cursive, flowing style.

D.R. Fraser  
*Dean*

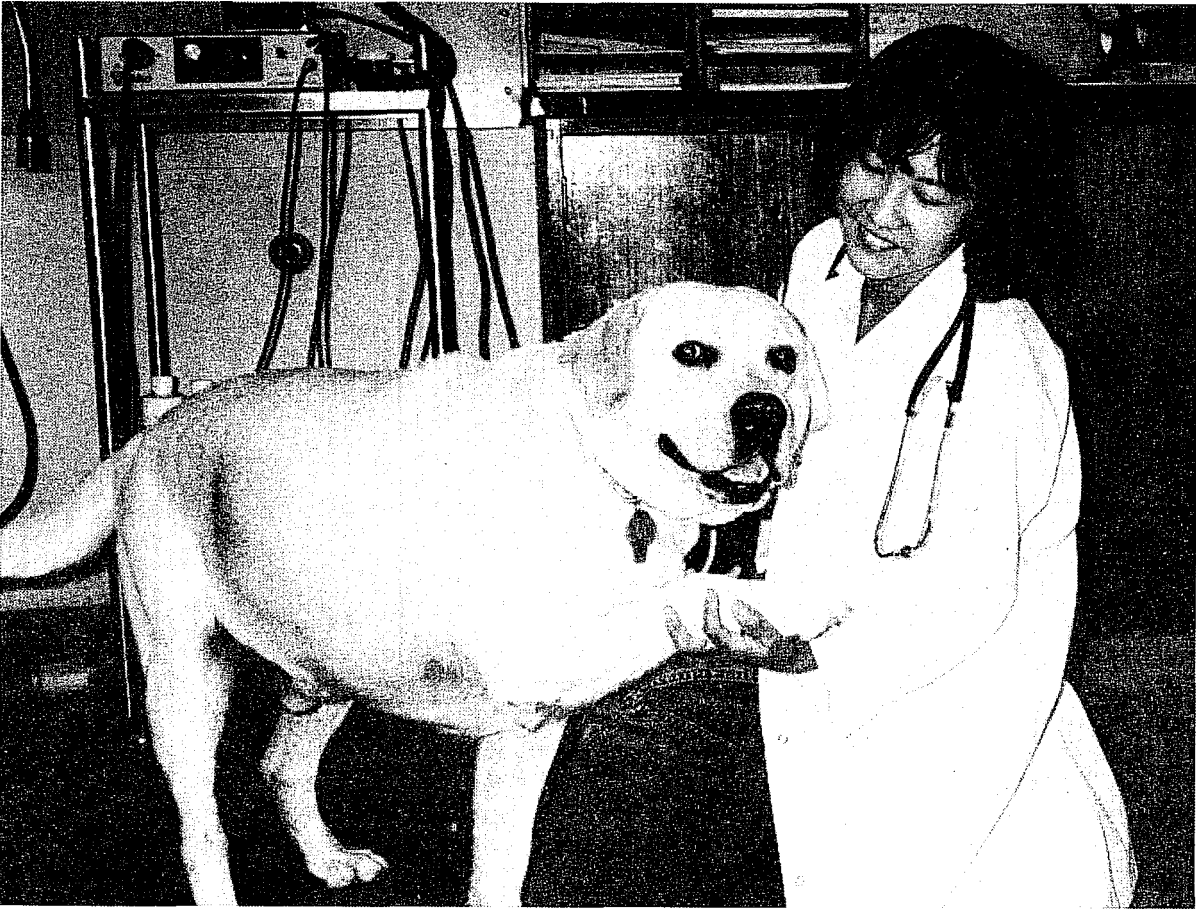
Congratulations on your success in being selected from the many applicants seeking enrolment in the Faculty of Veterinary Science. I hope your experience here, in study and learning, will be enjoyable and rewarding. Members of the Faculty are eager to assist you in all aspects of your university education. Please do not hesitate to consult us on any matter where we may be able to help. The University also provides many services for assisting students with medical, financial, emotional and learning difficulties. The Sub-Dean for Student Welfare or the Faculty Secretary are able to help you make contact with these central services.

Those of us who study, teach or practise in veterinary science are privileged to work with animals. We should be mindful of the obligations and responsibilities this imposes on us. Veterinary students and scientists naturally have a humane and respectful attitude to the animals we care for and study. The privilege of working with animals in education and research is an immensely valuable one. To justify and maintain that privilege we need to ensure that the care of animals in our charge is of the highest standard.

In this handbook you will find descriptions of the study requirements for the BVSc degree as well as for postgraduate degrees in the Faculty. The program of study for the BVSc degree covers many topics in basic and applied animal biology. Graduates find that the specialised knowledge and skills they acquire over five years opens up a wide range of career paths. Nevertheless, the Faculty is aware that courses in veterinary science can always be improved. A review of the undergraduate curriculum is currently in progress and the modifications in course design that will follow will aim to enhance the efficiency of teaching and learning.



*Round House*



*Dr Ritsuyo Kitada with a veterinary patient*

# 1 Staff<sup>1</sup>

## FACULTY

### Dean

Professor David Ross Fraser, PhD *Camb.* BVSc

### Pro-Dean

Professor Michael MacLaren Bryden, BVSc *Qld* DScVM  
*Cornell* PhD DSc, FAIBiol

### Associate Deans

#### *Animal Welfare*

Dr Robert J. Dixon, BSc(Vet) BVSc PhD *Massey*

#### *Camden Campus*

Professor John R. Egerton, BVSc *Qld* DVSc DipBact *Lond.*,  
MACVSc MASM

#### *Postgraduate Education*

Associate Professor Grant M. Stone, BScAgr PhD

#### *Professional and Community Relations*

Dr William L. Porges, HDA *Hawkesbury Agric. Coll.*  
DipEd(Tert) *Darling Downs I.E.A.* BVSc PhD, MRCVS

#### *Research*

Professor Alan J. Husband, PhD DSc *N'cle (N.S.W.)* BScAgr,  
FASM

#### *Undergraduate Education*

Professor Brian R.H. Farrow, BVSc PhD, FACVSc MRCVS

### Sub-Dean Student Welfare

Dr G. Henry Collins, BVSc *Brist.* PhD *Massey*, MRCVS

### Secretary to the Faculty

Mary Haswell, BA

#### *Administrative Assistants*

Tess La-Lande  
Patricia Moroney  
Lyn Robson

#### *Finance Officer*

Jenny Recio

## DEPARTMENTS

### Animal Health

#### *Professor*

\*John Ross Egerton, BVSc *Qld* DVSc DipBact *Lond.*, MACVSc  
MASM - -

Appointed 1972

#### *Associate Professors*

Garry M. Cross, MVSc PhD  
Robert J. Love, MVSc PhD *Brun.*, FACVSc

#### *Associate Professor and Superintendent of the Rural Veterinary Centre*

David R. Hodgson, BVSc PhD DipACVIM, FACBS FACSM  
MRCVS

#### *Senior Lecturers*

Robert J. Dixon, BSc(Vet) BVSc PhD *Massey*  
Anthony W. English, BVSc PhD *Qld*, MACVSc RFD  
Robert J. Rawlinson, BVSc DVR, FACVSc

#### *Lecturers*

Kym A. Abbott, BVSc MVS, FACVSc  
Jennifer L. Hodgson, BVSc DipVetPath PhD *Washington  
State*

#### *Senior Veterinary Registrars*

Andrew Dart, BVSc DipVetClinStud DipACVS  
Elizabeth Dill-Macky, BVSc DipVetClinStud  
Sarah Goldsmid, BVSc MVetClinStud, FACVSc  
Stephen A. McClintock, BVSc MVetClinStud, MACVSc  
Robert Rheinberger, BVSc, MACVSc MRCVSc  
Robert C. Whirton (Chris), BVSc, FACVSc

#### *Clinical Pathologist*

Allan KesseU, BVSc, MVCS

#### *Clinical Residents*

Marnie Coulton, BVSc DipVetClinStud  
Lucile Creis, BVSc  
Bradley Dowling, BVSc  
Nicholas Malikides, BVSc DipVetClinStud

#### *Interns*

Petra Cernikova, BVSc  
Craig Kelly, BVSc  
Neil Moss, BVSc  
Christopher O'Sullivan, BVSc  
Melissa Strong, BVSc

#### *Nursing Staff*

Julie Bennetts  
Karen Ross

#### *Senior Research Fellow*

Herman W. Raadsma, MSc(Agr) PhD

#### *Administrative Officer*

Warren J. Kelly, AICM

#### *Senior Technical Officer*

Marilyn Jones

#### *Technical Officers*

Sandra Biffin  
Ron Henderson  
Craig L. Kristo  
Jiri Tasler

#### *Research Assistant*

Om P. Dhungyel, BVSc MScVetSc

#### *Laboratory Assistant*

Eileen Risby

#### *Animal Attendants*

Raymond Clissold  
Barry Gray  
Barry Hall  
David Palmer  
Matthew Van Dijk

#### *Administrative Assistants*

Helen Frappell  
Evelyn Camilleri  
Selena Marcusson

<sup>1</sup>As known at October 1996

\*Head of Department

Deanna Rickard  
Colleen Ritchard  
Katherine Shepherd

*Farm Overseer*  
Andy Scherer

#### **Honorary Associates**

J.B. Mattick, PhD *Monash* BSc  
J.I. Rood BSc PhD *Monash*

### **Animal Science Sydney**

#### *Professor*

David Ross Fraser, PhD *Camb.* BVSc  
Appointed 1986

#### *Associate Professors*

Gareth Evans, BA *Oxf.* PhD  
Christopher Moran, PhD *A.N.U.* BSc  
Frank W. Nicholas, PhD *Edin.* BScAgr  
\*Grant M. Stone, BScAgr PhD

#### *Senior Lecturers*

David L. Evans, BVSc PhD  
Chis Maxwell, BScAgr PhD

#### *Lecturers*

Melanie Collier, BSc PhD *Leeds*  
Paul McGreevy, BVSc PhD *Brist.*  
Rosanne M. Taylor, BVSc PhD

#### *Associate Lecturer*

Michelle L. Hyde, BScAgr PhD

#### *Senior Technical Officers*

Edward J. Damas, MSc  
Irene van Ekris, BSc *J.C.U.*  
Angelika Trube

#### *Technical Officers*

Dung T. Doan  
Kim Heasman  
Helen Hughes  
Michael Lensen  
Kerry Murdoch  
Andrew Souter  
Brian Tyrell

#### *Administrative Assistants*

Carolyn Butler  
Margaret Byrne

### **Camden**

*Associate Professor and William McIlrath Fellow*  
Roy C. Kellaway, BSc(Hort) *Lond.* PhD N.E. DTA *W.I.*

#### *Associate Professors*

Derick Balnave, PhD DSc *Belf.*, FRSCHEM  
Wayne L. Bryden, MRurSc DipEd N.E. PhD  
James M. Gooden, BAgSc *Mel.* PhD  
Peter C. Wynn, MRurSc DipEd N.E. PhD

#### *Senior Lecturers*

Ian J. Lean, BVSc PhD *Calif.*  
Bevan G. Miller, BVSc PhD

#### *Professional Officer*

Yasin Mollah, BSc MSc(Chem) *Dhaka* MRurSc N.E. PhD

#### *Senior Technical Officer*

Chris Stimson

#### *Technical Officers*

John McClure  
Kaylene A. Scrimgeour

#### *Administrative Assistants*

Carole Browne  
Elizabeth Thomas

#### *Animal Attendants*

Melinda Jones  
Kim McKean

### **Honorary Appointments**

#### *Emeritus Professors*

E.F. Annison, PhD DSc *Lond.*  
C.W. Emmens, PhD DSc *Lond.* HonDVSc, FSS FAA  
HonFACVSc HBIOL CBiol

#### *Honorary Associates*

J.K. Kong, DSc *Bruxelles*  
I.C.A. Martin, BVSc PhD  
John R. Mercer, BSc *WAust.* PhD *Camb.*  
B.L. Sheldon, BAgSc PhD

#### *Research Associate*

Elizabeth J. Post, BSc PhD

### **Veterinary Anatomy**

#### *Professor*

\*Michael MacLaren Bryden, BVSc *Old* DScVM *Cornell* PhD  
DSc, FAIBiol  
Appointed 1988

#### *Senior Lecturer*

Paul R. Hopwood, DipTertiaryEd N.E. BVSc PhD, MRCVS

#### *Lecturer*

Glenn M. Shea, BVSc PhD

#### *Associate Lecturer*

Susan Hemsley, MVSc

#### *Professional Officer, Grade IV*

Rhondda B. Canfield, BVSc PhD, MRCVS

#### *Administrative Assistant*

Lyn Hicks

#### *Senior Technical Officers*

Richard Borg  
Bozena Jantulik

#### *Technical Officer*

Don Slade

#### *Laboratory Attendant*

Norman Dow

### **Honorary Appointments**

#### *Emeritus Professor*

Rex M. Butterfield, PhD DVSc *Old* MVSc, FACVSc

#### *Honorary Associate*

Douglas H. Cato, MSc PhD

### **Veterinary Clinical Sciences**

#### *Professor*

\*Brian R. H. Farrow, BVSc PhD FACVSc MRCVS  
Appointed 1995

#### *Professor in Veterinary Clinical Studies (Personal Chair)*

Reuben J. Rose, BVSc PhD DVSc DipVetAn, FRCVS FACBS  
MACVSc  
Appointed 1989

#### *Associate Professors*

A. David J. Watson, BVSc PhD, FRCVS FAAVPT MACVSc  
Andrew K.W. Wood, PhD *Melb.* MVSc DipVetRad



### Senior Lecturers

Phillip E. Davis, MVSc, MRCVS  
Geraldine B. Hunt, BVSc MVetClinShid PhD, FACVSc  
Richard Malik, PhD *A.N.U.* BVSc MVetClinShid DipVetAn,  
FACVSc (part-time)  
William L. Porges, *HDAHawkesbury Agrk.Coll.* DipEd(Tert)  
*Darling Downs I.A.E.* BVSc PhD, MRCVS

### Superintendent of the Veterinary Teaching Hospital and Senior Lecturer

David B. Church, BVSc PhD, MACVSc

### Lecturer

Darien Lawrence, BVSc *Massey MS Florida*

### Clinical Registrars

Jason Beck, BVSc, MACVSc  
David Simpson, BVSc, MVCS  
Graham Swinney, BVSc DVCS, MACVSc

### Clinical Residents

Sue Foster, BVSc  
Ruth Youmans, BVSc, DVCS MACVSc

### Visiting Lecturers/Demonstrators

Graeme S. Allan, MVSc DipACVRad, FACVSc  
Anthony P. Black, BVSc, FACVSc  
James Delia-Vedova, BVSc  
Brenda Dixon, BVSc *Old*  
Richard Dixon, MS *Iowa* MVSc DipACVRad, MACVSc  
MRCVS ARACVR  
Jeffrey S. Smith, BVSc DipACVO, FACVSc  
R. Max Zuber, BVSc, FACVSc

### Administrative Manager

Daniela Viola

### Senior Technical Officer

Dorothy R. Lewis, MSc *Br.Col.*

### Radiographer

Helen M. Laurendet, BSc(Appl), MIR

### Accounts Clerk

Maureen Mahoney

### Research Assistant

Shirley P. Ray, BAppSc *N.S.W.I.T.* MSc *N.S.W.* DipEd

### Animal Attendants

Leanne Berle  
Rhonda L. Foreman  
Mary Lumsden  
Antonio Nastasi  
Janelle Patten  
Georgina Phillips

### Administrative Assistants

Leonie Beadman  
Sarah Ingham  
James M. Posen  
Patricia Roberts

### Honorary Appointments

#### Emeritus Professor

Marshall John Edwards, MVSc *Liv.* PhD DVSc, MRCVS  
MACVSc

#### Honorary Associates

S.B. Barnett, MSc PhD  
Allan Duffield, BSc PhD *W.Aust.*  
C.R. Howlett, BVSc PhD, MRCVS MACVSc  
B.K. Milthorpe, BA *Macq.* PhD *A.N.U.*  
David A. Walsh, HDA *Hawkesbury Agric.Coll.* MSc PhD

## Veterinary Pathology

### Hughes Professor

\*Alan James Husband, PhD DSc *N'cle (N.S.W.)* BScAgr,  
FASM  
Appointed 1992

### Associate Professors

Paul J. Canfield, BVSc PhD, FACVSc MRCPath MRCVS  
Daria N. Love, PhD DVSc, FRCPath MASM FACBS  
Terence L.W. Rothwell, PhD DVSc, MACVSc

### Senior Lecturers

G. Henry Collins, BVSc *Brist.* PhD *Massey*, MRCVS  
Garry S. Grohmann, BSc *U.N.S.W.* PhD, FASM  
Nicholas C. Sangster, BSc(Vet) BVSc PhD

### Lecturers

Malcolm P. France, BVSc

### Senior Research Fellow

Vivienne E. Reeve, BSc PhD

### Professional Officer Grade IV

David L. Griffin, BSc *Macq.* DipMT *A.I.M.L.T.*, MAIMS

### Professional Officer Grade I

Denise I. Wigney, BVSc DipVetPath

### Professional Assistant Grade II

Patricia A. Martin, MVSc

### Research Officer

Shisan Bao, MB BS *S.S.M.U. (P.R. of China)* PhD

### Postdoctoral Research Fellow

Wendy Muir, BScAgr

### Senior Technical Officers

Sally E. Pope, BTHC  
George Tsoukalas, PTHC

### Technical Officers

Svetlana M. Patoka, BSc *Inst. ofKriboy Rog* MTC  
Karen L. Wadwell, PTHC BAppSc(MedLabSci) *C.Sturt*

### Executive Assistant

Nanette R. Lawrence

### Administrative Assistant

Lyndell M. Tollefsen

### Honorary Appointment

#### Emeritus Professor

Clifford Harold Gallagher, PhD *Lond.* DVSc, FACVSc  
FRCPath

#### Honorary Associate

Graham D. Bailey, BVSc PhD DipVetClinStud

## OTHER UNITS

### Laboratory Animal Services

#### Director

Robert C.C. Ratcliffe, BVSc, MACVSc

## TEACHING STAFF FROM OTHER

### FACULTIES

#### Biochemistry

##### Associate Professor

Michael B. Slaytor, MSc PhD

## Biology

*Director of First Year Biology*

Mary Peat, BSc Birm. PhD Brist.

## Biometry

*Lecturer*

Peter C. Thomson, MSc MAppStat Macq. PhD

## Chemistry

*Director of First Year Studies*

Raymond K. Pierens, MSc PhD, MRSCChem MRACI CChem

4

## Crop Sciences

*Senior Lecturer*

Dennis R. de Kantzow, BScAgr DipAgrEc, FAIAS

## Pharmacology

*Senior Lecturer*

Jill E. Maddison, BVSc PhD DipVetClinStud, FACVSc

## Physics

*Lecturer in charge of First Year courses*

Rosemary Millar

## 2 The Faculty of Veterinary Science

### 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 Main Quadrangle, but towards the end of 1913 they were moved completely into the present main building (J.D. 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 J.D. 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 present 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) and an Animal Science building (R.M.C. Gunn Building) have been erected at the Sydney campus.

The number of departments has grown from one to five, and over 2500 students have been awarded the BVSc degree. 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 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.

### Membership of the Faculty

Membership of the Faculty is specified in the following section of the Senate resolutions. The resolutions are published in full in the Statutes section of the *Calendar 1996, Vol. I: Statutes and Regulations*.

1. The Faculty of Veterinary Science shall comprise the following persons:
  - (a) the Professors, Readers, Associate Professors, Directors, Senior Lecturers, Lecturers and Associate Lecturers being full-time or fractional (50% or greater) members of the tenured, tenurable and fixed-term teaching staff in the Departments of Animal Health, Animal Science, Veterinary Anatomy, Veterinary Clinical Sciences and Veterinary Pathology;
  - (b) the Heads of the Departments of Biochemistry and Pharmacology, together with one full-time permanent member of each of these Departments nominated biennially by the Head of the Department;
  - (c) the Heads of the Schools of Physics, Chemistry and Biological Sciences or one full-time permanent member of the academic staff of each of those Schools nominated biennially by the Head of the School;
  - (d) the Dean of the Faculty of Science and the Principal of the Orange Agricultural College *ex officio*;
  - (e) the Dean of the Faculty of Agriculture;
  - (f) the Director of the University farms;

- (g) the Superintendents, as defined under the N.S.W. Veterinary Surgeons Act, and Senior Clinical Pathologist, being full-time members of the staff of the Veterinary Teaching Hospital and the Rural Veterinary Centre;
- (h) the Director and the Deputy Director of Laboratory Animal Services;
- (i) two members of the staff of the Department of Crop Sciences nominated by the Head of the Department;
- (j) not more than three persons distinguished in the field of veterinary science appointed by the Faculty on the nomination of the Dean of the Faculty;
- (k) one nominee each of the Australian College of Veterinary Scientists, the N.S.W. Division of the Australian Veterinary Association and the J.D. Stewart Foundation, who may be a member of the Faculty by virtue of one of subsections (a) to (i) inclusive;
- (l) the Director of the Postgraduate Foundation and the Postgraduate Committee in Veterinary Science and the Directors of the Dairy Husbandry Research Foundation and the Poultry Husbandry Research Foundation *ex officio*;
- (m) full-time members of the research staff of the Faculty holding the position of Research Fellow or above;
- (n) not more than three students elected in the manner prescribed by resolution of the Senate; and
- (o) such other persons as may be appointed by the Faculty on the nomination of the Dean of the Faculty.

2. A person appointed pursuant to subsections l(j)/ (k) and (o) shall be appointed for a period of three years and shall be eligible for reappointment for one further period of three years.

### Student membership of the Faculty

The first student members of the Faculty Of Veterinary Science were elected to hold office in 1974.

The three student members are two undergraduate students enrolled as candidates for the degrees of Bachelor of Veterinary Science or Bachelor of Science (Veterinary) at the University of Sydney and one postgraduate enrolled as a full-time or part-time candidate for a postgraduate degree or diploma in the Faculty, not otherwise eligible for membership of the Faculty.

### 3 Undergraduate degree requirements

The courses for the BVSc degree extend over a minimum of five years. First year is concerned with the basic sciences and pre-clinical subjects. Some time is spent also at the University farms, Camden, where students are given training in the practical aspects of animal husbandry. Second and third years concentrate on pre-clinical and para-clinical subjects although introductory courses for veterinary medicine and surgery are started towards the end of third year. Students in fourth year continue their studies in the clinical subjects. Much of the time is spent in the Sydney University Veterinary Teaching Hospital where diseases of small animals are diagnosed and treated. The final year is spent at the University farms, Camden, where students normally live in at Nepean Hall. Clinical exposure to large animals as well as small animals occurs through the Rural Veterinary Centre. Students also attend theory and practical courses in aspects of diseases of farm animals.

Students may interrupt their basic undergraduate candidature to undertake a year of advanced study in a subject area which may lead to the degree of Bachelor of Science (Veterinary).

Further information on the courses for the BVSc degree is given below.

#### Bachelor of Veterinary Science: BVSc

The requirements for the degree of Bachelor of Veterinary Science are set out in the resolutions of the Senate of the University.

1. Candidates for the degree of Bachelor of Veterinary Science shall complete the following courses of instruction:

- (i) *In the first year—*  
Introductory Veterinary Science V115  
Introductory Biology V124  
Chemistry V103  
Physics 1 (Life Sciences) V107  
Veterinary Anatomy and Histology I V100  
Veterinary Cytology V110  
Biometry V112  
Animal Husbandry V101  
Pastoral Botany and Agronomy VI16
- (ii) *In the second year—*  
Veterinary Anatomy and Histology II V207  
Veterinary Embryology V218  
Veterinary Physiology V206  
Biochemistry V202  
Animal Genetics V201 -  
Veterinary Pathology V225
- (iii) *In the third year—*  
Animal Nutrition V321

- Veterinary Physiology V317  
Veterinary Pathology V315  
Veterinary Bacteriology and Mycology V302  
Veterinary Virology V309  
Veterinary Pharmacology and Toxicology V306  
Veterinary Medicine V323  
Veterinary Surgery V328  
Veterinary Parasitology V314
- (iv) *In the fourth year—*  
Veterinary Medicine V405  
Veterinary Surgery V407  
Veterinary Parasitology V426  
Veterinary Anatomy III V413  
Veterinary Clinical Pathology V404  
Applied Reproduction and Obstetrics V422  
Animal Nutrition V421  
Animal Husbandry Practical Report
- (v) *In the fifth year—*  
Bird Health and Production V502  
Horse Medicine V503  
Pig Health and Production V526  
Cattle Health and Production V507  
Special Medicine V508  
Sheep Health and Production V519  
Veterinary Surgery V505  
Veterinary Public Health V504  
Essay V517  
Clinical Practice V500

2. A course shall consist of lectures, together with such clinical, laboratory and tutorial instructions, practical work, exercises and essays as may be prescribed by the Faculty.

In these resolutions, 'to complete a course' and derivative expressions mean:

- (a) to attend the lectures and seminars, if any, for clinical, laboratory or tutorial instructions;
  - (b) to complete satisfactorily the practical work, exercises and essays, if any; and
  - (c) to pass the examinations, if any, in the course.
3. Class examinations may be held during each course of instruction in each semester; students shall not absent themselves from these examinations except upon production of a medical certificate. A report of the results signed by the responsible teacher shall be presented to the Dean and may be taken into account at the annual examinations.
4. (1) An annual examination may be held for each of the prescribed courses of study for the degree.  
(2) At each annual examination, a candidate shall be required to give proof of his or her knowledge by written answers to the questions

set, and if required also by practical or viva voce examination or both.

5. No candidate for the degree may enrol in any of the courses prescribed for the second or subsequent years of candidature unless that candidate has completed at the one examination all the requirements of the previous year.

6. A candidate who has been enrolled 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. A candidate for the degree may enrol in the courses prescribed for the fourth or subsequent years of candidature only after having demonstrated proficiency in the safe handling of animals, in such a manner as may from time to time be prescribed by the Faculty.

8. During the fifth year, candidates shall be required to spend such periods in residence at the University of Sydney farms as the Faculty may from time to time determine.

9. Before admission to the degree of Bachelor of Veterinary Science, candidates shall be required to complete such practical clinical work as may from time to time be prescribed by the Faculty.

10. Before admission to the degree of Bachelor of Veterinary Science, each candidate shall be required to produce evidence of having spent such periods as may be specified by the Faculty in gaining approved practical experience in animal management.

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

(2) Results obtained in annual examinations shall determine whether a candidate qualifies for the award of Honours.

(3) 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.

(4) Notwithstanding the provisions of subsection (3) 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.

(5) If a candidate graduates with First Class Honours and the Faculty is of the opinion that the candidate's work is of sufficient merit, the candidate shall receive a bronze medal.

### Award of honours

A system of Weighted Average Marks (WAM) is used as a measure of academic performance each year. The WAM is calculated by summing the products of the marks achieved and the weighted values of the courses taken and then dividing by the sum of the weighted course values. The formula used is:

$$WAM = \frac{\sum W_v M}{\sum W_v}$$

where  $W_v$  is the weighted course value and  $M$  is the mark achieved out of 100. Only the first attempt at

each course is included, except where discontinued with permission. Weights are determined on the basis of timetabled hours. Where an exemption is granted from a subject, the mark used for the calculation of the WAM is the mean mark of contemporary students in that subject.

Resolutions of the Senate of the University governing award of honours at graduation have already been outlined. The Faculty would expect a candidate to achieve a WAM of at least 65 per cent to qualify for Second Class Honours, 70 per cent for First Class Honours, and 75 per cent for Honours I and the University Medal. Note that, in general, Honours are not awarded to students who have not completed the course in minimum time.

## Bachelor of Science (Veterinary): BSc(Vet)

The opportunity exists for suitably qualified students who have completed three or more years of the BVSc degree to interrupt their formal studies for one year to take part in the research of the Faculty and work for the BSc(Vet) degree. Many students have done so and have found the experience enjoyable and rewarding. Candidates for the BSc(Vet) work in one or more of the departments of the Faculty and are supervised by a member of the Faculty. They are expected to complete the requirements for the degree during one calendar year.

A wide range of research is undertaken in the Faculty and it would not be difficult for most students to find an area of interest. However it is essential to have had adequate prerequisite training in the scientific field chosen for advanced study. Insufficient training may preclude enrolment in some areas. The Dean and other members of staff will be able to provide advice on this point.

Students wishing to be considered for enrolment for the BSc(Vet) degree should consult members of the department in which they propose to study and should lodge an application for enrolment with the Faculty Office. Applications for candidature are to be considered at the December meeting of the Board of Examiners of the Faculty. It is necessary to have all the arrangements completed well before applying to enrol, preferably before the annual examinations for the BVSc. Prospective candidates are therefore encouraged to begin their consultation with staff early in second semester.

The purpose of the degree is principally to impart experience and skills in scientific research. Candidates will gain experience in experimentation and in the oral and written presentation of scientific results. The development of these skills will be assessed in four ways. Firstly, each candidate, after consultation with his or her supervisor and after appropriate study of the literature, will give a short, informal, small group seminar to outline the proposed research project. This seminar enables helpful comments and suggestions to be incorporated into the research plan. Secondly, after the research has been completed, candidates will

give a further seminar to present the results and conclusions of their work. Thirdly, a written account of the research, in the form of a dissertation, should be lodged in the Faculty Office by the end of November and no later than the end of December in the year in which the work is done. Late submission will normally disqualify a candidate for consideration for First Class Honours for the BSc(Vet) degree. The dissertation will be assessed by two examiners who will also question the candidate on the topic of the research in the fourth assessment process, a viva voce examination. These four assessments are intended not only to evaluate the standard of achievement but also to provide students with additional opportunities to learn the various skills of presentation of the results of scientific research.

The dissertation represents 70%, the viva voce examination 20% and the final seminar 10% of the marks for the assessment of the degree. Successful candidates will be awarded the degree with either First Class, Second Class, or Third Class Honours. If the dissertation is submitted before the end of November, it is possible for successful candidates to receive the degree at the graduation ceremony in December.

A list of some recent projects is given below as a guide to some of the areas in which candidates have worked. Areas of possible candidature change regularly and intending candidates are advised to consult with the Dean and other staff. The resolutions of the Senate and the Faculty concerning the degree follow.

Recent projects have included: 'An investigation of the involvement of the MHC in resistance to footrot in sheep using R.F.L.P. techniques', 'Adaptations of equine skeletal muscle to different training intensities', 'Immunology of mange caused by *Trixacarus caviae* in guinea pigs', and 'Pathologic and sonographic studies of equine tendons and ligaments'.

### Resolutions of the Senate

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. 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.

3. Applications for admission to candidature for the degree of Bachelor of Science (Veterinary) may be approved by the Dean on behalf of the Board of Examiners.

4. Each candidate shall be supervised by a member of Faculty and, if it is considered appropriate to the field of the work, by one or more associate supervisors as well.

5. Assessment and examination for the award of the degree shall be by dissertation, oral examination and presentation of seminars.

6. (1) The degree shall be awarded only with Honours.

(2) There shall be three classes of Honours, namely Class I, Class II and Class III.

7. A candidature may be terminated at any time by the Dean if, in the opinion of the Supervisor and the Associate Dean concerned with the degree, the candidate's work is unsatisfactory.

### Resolutions of the Faculty

1. The responsibility for overseeing the implementation of the Faculty's academic policies concerning the degree is to lie with the Board of Examiners of the Faculty which will act through the Dean on the advice of the Associate Dean concerned with Research and Scholarship.

2. The responsibility for supervision of the administrative procedures concerned with the degree will lie with the Associate Dean and members of the Research and Scholarship Committee who will act and report through the Dean to the Board of Examiners and, if requested, to the Faculty.

3. 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. The minimum acceptable qualifications for the supervisor of a candidate for the degree is an appropriate higher degree.

5. In response to an application for candidature, the Associate Dean concerned with Research and Scholarship will, in consultation with the candidate, the proposed supervisor and the head(s) of the department(s) or school(s) in which the work is to be undertaken, 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.

6. Recommendations for approval of each candidature will be made by the Associate Dean concerned with the degree through the Dean to the Board of Examiners in a report describing:

- (a) the name of the candidate;
- (b) the field of study;
- (c) the nominated supervisor and, if applicable, the associate supervisor(s);
- (d) where the work will be undertaken; and
- (e) any special circumstances surrounding the candidature.

7. The Research and Scholarship Committee will, in respect of all candidatures:

- (a) maintain an overview of the examinations of all candidates;
- (b) organise the implementation of the Faculty's policies on examination of candidates;
- (c) maintain an overview of the standards achieved and grades awarded in examinations; and
- (d) report, to the Board of Examiners, the grades awarded to all candidates.

8. The assessment and examination procedures are defined as follows:

- (a) Each candidate, in the presence of one or more members of the Research and Scholarship 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 Research and Scholarship 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 November, recommended by the Research and Scholarship Committee and approved by the Board of Examiners. Late submission will normally disqualify a candidate from consideration for Honours Class I 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 dissertation shall be examined by two examiners, at least one of whom should normally be from outside the department in which the work was done and neither of whom should normally be a supervisor of the candidate.
- (e) Each Candidate shall be examined on the topic of the dissertation at a viva voce examination conducted by the two examiners. Members of the Research and Scholarship Committee and the supervisors may attend this examination.
- (f) The examiners shall separately write reports giving their independent assessments of the dissertation and making separate recommendations to the Associate Dean concerned with Research and Scholarship. The examiners shall propose a joint mark and write a joint report on the viva voce examination.
- (g) The dissertation is to represent 70%, the viva voce examination 20%, and the assessment of the final seminar 10% of the total assessment for the award of the degree.

9. 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.

10. Honours shall be awarded according to the following scale:

<i>Grade (%)</i>	<i>Honours</i>
75+	Class I
65-74	Class II
50-64	Class III

11. If a grade is less than 50%, the degree will not be awarded.

12. Matters of policy concerning the degree are to be determined by the Faculty with such advice as it may wish to seek from time to time.



## 4 Courses of study BVSc

### *Courses are subject to alteration*

Courses and arrangements for courses, 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 courses, arrangements or staff allocations at any time without notice.

### *Course coordinators*

The coordinator for each course is indicated. These were correct at the time of printing but are subject to change.

### *Books*

Students are advised not to buy textbooks until lectures commence and lecturers recommend the preferred books. Reference books are for reference only. Printed book lists are available from the Faculty Office.

### *English expression*

The Faculty of Veterinary Science expects students to be proficient in both written and spoken English expression. Students with problems in this area should consult the following books and seek advice from members of Faculty. The Language Study Centre and the Centre for Teaching and Learning offer help in this area.

H.W. Fowler *A Dictionary of Modern English Usage*  
W. Strunk *et al. The Elements of Style*

## First year courses

### **Introductory Veterinary Science V115**

Dr Collins and others

A non compulsory course of ten 1-hour classes open to all first year students. The classes include talks by eminent veterinarians in a variety of occupations and activities designed to help students adjust to academic life in the Faculty and University.

### **Introductory Biology V124**

Dr Mary Peat

A course of 39 lectures on aspects of biology serving as a basis for, and supplementary to, other courses in veterinary science.

Topics include: invertebrates (10 lectures), vertebrates (14 lectures), plant ecology (6 lectures), ecology (4 lectures), and behaviour (5 lectures).

Reference books

W.T. Keeton and J.L. Gould *Biological Science* (Norton, 1986)  
D.R. Kershaw *Animal Diversity* (University Tutorial Press, S. Lough, 1983)

### **Chemistry V103**

Dr Pierens

This is a two-semester course designed to provide (i) a suitable foundation for subsequent subjects such as biochemistry, 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 the Chemistry 2-unit HSC course or the Chemistry component of the Science 3/4-unit course.

Fully detailed information about the course is available from the Chemistry School.

#### *Lectures*

A course of 69 lectures comprising 42 lectures in inorganic and physical chemistry and 27 lectures in organic chemistry, with illustrations from biological areas.

#### *Practical work*

A course of 14 three-hour sessions.

#### *Tutorials*

A series of 27 tutorials (1 per week).

#### *Examinations*

Theory examinations are held at the end of each semester.

Students are advised at the beginning of the year about other factors contributing to assessment for the course.

#### *Textbooks*

Detailed information about prescribed textbooks is available from the Chemistry School

### **Physics I (Life Sciences) V107**

Mrs Rosemary Millar

The physics course consists of lectures and laboratory work. It emphasises the concepts of physics and, where possible, shows the application of physics in the biological sciences. There are five units: forces and energy, thermal physics, properties of matter, physics of diagnostic tools and electricity and magnetism. The course is taught on the assumption that students have completed Mathematics 2-unit and either Physics 2-unit or the Physics section of the Science 4-unit course for the Higher School Certificate. Tutorials are available for those who have not studied physics before.

#### *Textbooks*

*Physics I Laboratory Manual, Dentistry and Veterinary Science* (School of Physics, 1995)  
Kane and Sternheim *Physics* (Wiley, 1988)

### **Veterinary Anatomy**

The course of instruction in veterinary anatomy is given in the Department of Veterinary Anatomy in the first, second and fourth years of the veterinary course. The course covers the anatomy of domestic animals including the horse, ox, sheep, pig, dog, cat and domestic fowl.

The components of the course are Veterinary Cytology (V110), Veterinary Anatomy and Histology I (V100), Veterinary Anatomy and Histology II (V207), Veterinary Embryology (V218) and Veterinary Anatomy III (V413).

## Veterinary Cytology V110

Dr Hopwood

A course of 12 lectures and 12 hours of practical classes which covers the morphology of cells and an assignment to be completed by the end of semester 1.

### Textbook

H. Dellman and E.M. Brown *Textbook of Veterinary Histology* 4th edn (Lea & Febiger, 1993)

### Reference books

W.J. Bacha and L.M. Woods *Colour Atlas of Veterinary Histology* (Lea & Febiger, 1990)

M.K. Ross and L.J. Romrell *Histology: A Text and Atlas* (Williams & Wilkins, 1989)

R. Warwick and P.L. Williams (eds) *Gray's Anatomy* (Longman, 1973)

## Veterinary Anatomy and Histology I V100

Dr Hopwood

A course of 85 lectures and 105 hours of practical classes in which the anatomy of the dog is covered on a body system by body system basis.

### Textbooks

H.E. Evans *Miller's Anatomy of the Dog* 3rd edn (Saunders, 1993)

H. Dellman and E.M. Brown *Textbook of Veterinary Histology* 4th edn (Lea & Febiger, 1993)

### Reference books

W.S. Adam *et al. Microscopic Anatomy of the Dog: A Photographic Atlas* (Charles C. Thomas, 1970)

W.J. Bacha and L.M. Woods *Colour Atlas of Veterinary Histology* (Lea & Febiger, 1990)

W.J. Banks *Applied Veterinary Histology* (Williams & Wilkins, 1986)

J.S. Boyd *A Colour Atlas of Clinical Anatomy of the Dog and Cat* (Wolfe, 1991)

K.M. Dyce *et al. Textbook of Veterinary Anatomy* (Saunders, Philadelphia, 1987)

E.J. Field and R.J. Harrison *Anatomical Terms* (Heffer, 1968)

W.E. Le Gros Clark *The Tissues of the Body* (Oxford U.P., 1965)

R. Nickel *et al. The Locomotor System of the Domestic Mammals*

(Paul Parey, Hamburg, 1986)

R. Nickel *et al. The Viscera of the Domestic Mammals* (Paul Parey, Hamburg, 1973)

M.K. Ross and L.J. Romrell *Histology: A Text and Atlas* (Williams & Wilkins, 1989)

A. Schummer *et al. The Circulatory System, the Skin and the Cutaneous Organs of the Domestic Mammals* (Paul Parey, Hamburg, 1981)

S. Sisson and A. Grossman *Anatomy of Domestic Animals* (Saunders, 1975)

*Nomina Anatomica Veterinaria* (International Committee on Veterinary Anatomical Nomenclature, Vienna"; 1983)

## Biometry V112

Dr Thomson

Research in veterinary science requires experiments to be planned and analysed as sensibly and as

efficiently as possible. The study of biometry shows how simple statistical principles can be used to this end.

In addition to discussion of standard techniques of design and analysis, emphasis will be placed on developing an understanding of the important concepts. This means that a minimum of mathematical detail is required during the course.

Lectures are complemented by computer-based practicals, which allow students to practise and develop skills in applying statistical methods to real problems.

### Reference book

R. Mead *et al. Statistical Methods in Agriculture and Experimental Biology* 2nd edn (Chapman & Hall, 1993)

## Animal Husbandry V101

Assoc. Prof. Bryden

Students are required to undertake approximately 16 weeks of extra-mural training to gain experience in livestock husbandry. This is to be undertaken after commencing the veterinary course. The practical work is carried out on farms and stations.

A course of 46 lectures and one day weekly for ten weeks at the University Farms, Camden, where students are given training in animal husbandry. Practical work will be taken by all students, including repeat students, and will be examinable.

The lecture course includes: horses—their characteristics and management; cattle, sheep, pigs and poultry—the animal industries in Australia, management, production of meat, milk, wool and eggs; wool—wool and its qualities; cats, dogs and small animals—breeds and their management.

### Reference books

G. Alexander and O.B. Williams *The Pastoral Industries of Australia* 2nd rev. edn (Sydney U.P., 1986)

R.S. Anderson and A.T.B. Edney *Practical Animal Handling* (Pergamon Press, 1991)

Australian Meat and Livestock Corporation *Handbook of Australian Livestock* 3rd edn (A.M.L.C., Sydney, 1989)

V.G. Cole (ed.) *Beef Production Guide* 2nd rev. edn (N.S.W. U.P., 1982)

D.J. Cottle (ed.) *Australian Sheep and Wool Handbook* (Inkata Press, 1991)

J. A. A. Gardner *et al.* (eds) *Pig Production in Australia* 2nd edn (Butterworths, 1990)

C.W. Holmes and G.F. Wilson *Milk Production from Pasture* rev. edn (Butterworths, 1987)

K.A. Houpt and T.R. Wolski *Domestic Animal Behaviour for Veterinarians and Animal Scientists* (Iowa State U.P., 1982)

P.J. Huntington and F. Cleland *Horse Sense: The Australian Guide to Horse Husbandry* (Agmedia, 1992)

D.M. McCurnin *Clinical Textbook for Veterinary Technicians* (W.B. Saunders Co., 1985)

M.O. North and D.D. Bell *Commercial Chicken Production Manual* 4th edn (A.V.I. Publishing Co., 1990)

V.O'Farrell *Manual of Canine Behaviour* (Brit. Small Animal Vet. Assoc, 1992)

T.B. Poole (ed.) Univ. Federation' for Animal Welfare *Handbook on the Care and Management of Laboratory Animals*, 6th edn (Livingstone, 1986)

R.L. Reid *A Manual of Australian Agriculture* 5th edn (Heinemann, 1990)

G.H. Schmidt and L.D. Van Vleck *Principles of Dairy Science* 2nd edn (Prentice Hall, 1988)

P.J. Schmidt and N.T.M. Yeates *Beef Cattle Production* 2nd edn (Butterworths, 1985)  
 D.C. Turner and P. Bateson *The Domestic Cat: the Biology of its Behaviour* (Cambridge U.P., 1988)

D.M. Noden and A. de Lahunta *The Embryology of Domestic Animals: Developmental Mechanics and Malformations* (Williams & Wilkins, 1985)

#### Reference books

R.R. Ashdown and S.H. Done *Color Atlas of Veterinary Anatomy: The Horse* (Bailliere Tindall Gower Medical Publishing, London, 1987)  
 A. de Lahunta and R.E. Habel *Applied Veterinary Anatomy* (Saunders, 1986)  
 K.M. Dyce and C.J.G. Wensing *Essentials of Bovine Anatomy* (Lea & Febiger, 1971)  
 R.E. Habel *Guide to the Dissection of Domestic Ruminants* (published by the author, Ithaca, 1970)  
 R. Nickel *et al.* *The Locomotor System of the Domestic Mammals* (Paul Parey, Hamburg, 1986)  
 R. Nickel *et al.* *The Viscera of the Domestic Mammals* (Paul Parey, Hamburg, 1973)  
 I.R. Rooney *Biomechanics of Lameness in Horses* (Williams & Wilkins, 1969)  
 A. Schummer *et al.* *The Circulatory System, the Skin and the Cutaneous Organs of the Domestic Mammals* (Paul Parey, Hamburg, 1981)  
 S. Sisson and A. Grossman *Anatomy of Domestic Animals* (Saunders, 1975)

## Pastoral Botany and Agronomy V116

Mr de Kantzow

This course consists of 42 hours of lectures and practical classes. It includes the identification of pasture grasses, legumes and weeds and the common poisonous plants. The lecture course covers the agronomic and ecological principles of the production and utilisation of native and sown grassland communities. Topics covered include pasture growth and the environment, pasture quality, substances injurious to animal health, pasture improvement and management. A plant collection is part of the course.

#### Reference books

B. Auld and R. Medd *Weeds: An Illustrated Botanical Guide to the Weeds of Australia* (Inkata, 1987)  
 R.E. Barnes *et al.* *Forage Legumes for Energy-Efficient Animals Production* (USDA A.R.S., 1985)  
 G.M. Cunningham *et al.* *Plants of Western New South Wales* (N.S.W. Government Printer, 1981)  
*Flora of New South Wales* Vols 1,2,3 and 4 (N.S.W. University Press, 1992)  
*Handbook of Economic Plants of Australia* (CSIRO, 1993)  
 G.N. Harrington *et al.* *Management of Australia's Rangelands* (CSIRO, 1984)  
 L.R. Humphries *A Guide to Better Pastures in the Tropics and Sub-tropics* (Wright Stevenson & Co., 1991)  
 R.L. Ison and M.V. O'Reilly *A Guide to Better Pastures in Temperate Climates* (Wright Stevenson & Co., 1991)  
 E.J. McBarron *Medical and Veterinary Aspects of Plant Poisons in N.S.W.* (N.S.W. Agriculture, 1976)  
 W.T. Parsons and E.G. Cuthbertson *Weeds of Australia* (Inkata Press, 1992)  
 C.J. Pearson *et al.* *A Plain English Guide to Agricultural Plants* (Longman Cheshire, 1993)  
 C.J. Pearson and R.L. Ison *Agronomy of Grassland Systems* (Cambridge U.P., 1987)  
 J.W. Wheeler *et al.* *Temperate Pastures, Their Production, Use and Management* (Australian Wool Corporation and CSIRO, 1987)

## Veterinary Embryology V218

Dr Canfield

This course consists of 20 lectures and 16 hours of practical classes. The course covers the embryology of domestic animals.

#### Textbook

D.M. Noden and A. de Lahunta *The Embryology of Domestic Animals: Developmental Mechanisms and Malformations* (Williams & Wilkins, 1985)

#### Reference books

W.K. Latshaw *Veterinary Developmental Anatomy: A Clinically Oriented Approach* (B.C. Decker Inc., 1987)  
 K.L. Moore *The Developing Human. Clinically Oriented Embryology* 3rd edn (W.B. Saunders, 1982)  
 D.H. Steven *Comparative Placentation* (Academic Press, 1975)

## Veterinary Physiology V206

Dr McGreevy, Dr D. Evans, Assoc. Prof. G. Evans, Assoc. Prof. Stone, Dr Rosanne Taylor  
 Classes (2-3 lec & 1 prac/tut)/wk; Sem 2: 1 project  
 Assessment one 3hr exam/sem

About 68 hours of lectures and 86 hours of other classes which include laboratory experiments, videos, tutorials, problem-solving sessions, and computer-based tutorials and self-assessments. Students also undertake independent project work and present research results at seminars. Topics in the course include: homeostasis; neural and endocrine control mechanisms; body fluids, physiology of nerve and muscle; autonomic nervous system; cardiovascular and respiratory systems, renal system and acid-base balance; endocrinology; digestion; reflexes and male and female reproduction.

#### Textbook

J.G. Cunningham, *Textbook of Veterinary Physiology* (W.B. Saunders, 1992)

#### Reference books

List provided by the department

## Second year courses

### Veterinary Anatomy and Histology II V207

Prof. Bryden

This course covers the anatomy of the horse, ox, sheep, pig, cat and domestic fowl and comparative anatomy of some non-domesticated vertebrates; integrated microscopical anatomy of selected organs of those species.

The course consists of lectures and practical classes totalling 241 hours.

#### Textbooks

H. Dellman and E.M. Brown *Textbook of Veterinary Histology* 4th edn (Lea & Febiger, 1993)  
 K.M. Dyce *et al.* *Textbook of Veterinary Anatomy* (Saunders, 1987)  
 W.O. Sack and R.E. Habel *Rooney's Guide to the Dissection of the Horse* (Veterinary Textbooks, Ithaca, N.Y., 1982)

## Animal Genetics V201

Assoc. Prof. Nicholas

A course of 45 lectures introducing those aspects of genetics relevant to veterinarians. The first section (Genetics and Animal Disease) covers biochemical disorders, chromosomal abnormalities, non-Mendelian familial disorders, immunogenetics, pharmacogenetics, genetic variation in pests, parasites and pathogens, and genetic and environmental control of disease. The second section (Genetics and Animal Improvement) covers relationship and inbreeding, variation and heritability, breed history and structure, selection and crossing.

Textbook

F.W. Nicholas *Introduction to Veterinary Genetics* (Oxford University Press, Oxford, 1996)

Reference books

A.B. Chapman (ed.) *General and Quantitative Genetics* (Elsevier, 1985)

D.S. Falconer and T.F.C. Mackay *Introduction to Quantitative Genetics* 4th edn (Longmans, 1995)

L.D. Van Vleet et al. *Genetics for the Animal Sciences* (Freeman, 1987)

## Biochemistry V202

Assoc. Prof. Slaytor

The course consists of 78 lectures. The lectures in the first part of first semester cover the topics proteins, enzymes and molecular genetics in sufficient detail for the understanding of the intermediary metabolism lectures in the remainder of the year. The course provides background material for other subjects, particularly physiology, endocrinology and nutrition.

The laboratory work gives some manipulative skill in quantitative biochemistry and illustrates some of the techniques used in clinical pathology.

Textbooks

L. Stayer *Biochemistry* 4th edn (W.H. Freeman, 1995)

or

L.A. Moran and K.G. Scrimgeour *Biochemistry* 2nd edn (Prentice Hall, 1994)

P.W. Kuchel and G.B. Ralston *Biochemistry* Schaum's Outline Series (McGraw-Hill, 1988)

## Veterinary Pathology

The courses extend over the second, third, fourth and fifth years and embrace the following subjects:

- General Pathology
- Systemic Pathology
- Immunology
- Haematology
- Clinical Pathology

## Veterinary Pathology V225

Assoc. Prof. Rothwell

In second year, *General Pathology* deals with causes of disease, morbid and reactive processes, inflammation, immunological reactions, regressive and progressive tissue changes, including the study of neoplastic growths. Practical work includes the examination of gross and microscopic changes in representative examples of these processes.

Textbooks

W.W. Carlton and M.D. McGavin *Thomson's Special Veterinary Pathology* 2nd edn (Mosby, 1995)

C.A. Janeway and P. Travers *Immunobiology. The Immune System in Health and Disease* (Blackwell, 1994)

D.O. Slauson and B.J. Cooper *Mechanisms of Disease: A Textbook of Comparative General Pathology* 2nd edn (Williams & Wilkins, 1990)

## Third year courses

### Veterinary Physiology V317

Dr D. Evans, Dr McGreevy, Assoc. Prof. Stone, Dr Rosanne Taylor

Classes (3-4 lec & 2-3 prac/tut/seminar)/wk

Assessment one 3hr exam, 2 essays, one group project

This course consists of approximately 53 hours of lectures and 93 hours of other classes. These include tutorials, seminars, laboratory work, library research, computer based learning and self-assessment sessions. Students also participate in sessions which integrate physiology with veterinary pharmacology and pathology. Topics include sensory systems, central nervous system, pain, ruminant digestion, reproduction, animal welfare, cardiovascular system, development, thermoregulation, exercise physiology and normal and abnormal animal behaviour.

Textbook

J.G. Cunningham *Textbook of Veterinary Physiology* (W.B. Saunders, 1992)

Reference books

List provided by department

### Veterinary Pathology V315

Assoc. Prof. Rothwell

*Systemic Pathology* is an extension of General Pathology and applies general pathological principles to diseases of the various organs and systems of domestic animals.

Practical work includes the examination of gross and microscopic changes in representative examples of diseases of the major organs and instruction in the performance of post-mortem examination of animals.

Textbooks

W.W. Carlton and M.D. McGavin *Thomson's Special Veterinary Pathology* 2nd edn (Mosby, 1995)

C.A. Janeway and P. Travers *Immunobiology. The Immune System in Health and Disease* (Blackwell, 1994)

D.O. Slauson and B.J. Cooper *Mechanisms of Disease: A Textbook of Comparative General Pathology* 2nd edn (Williams & Wilkins, 1990)

### Veterinary Bacteriology and Mycology V302

Assoc. Prof. Daria Love

A course of 63 hours of lectures and 45 hours of practical work. Lectures outline the classification and general biological properties of bacteria and fungi. A systematic study of the principles of disease production by major veterinary pathogens is then presented.

Practical work includes the isolation, cultivation and identification of micro-organisms and examination of the tissues of animals affected by microbial diseases.

Tutorials and practical classes also demonstrate and apply principles of sample collection, handling and laboratory processing enabling students to understand the requirements necessary to aid diagnosis of infectious disease. Some practical procedures for antimicrobial testing of isolates are also given.

## Veterinary Virology V309

Dr Grohmann

A course of 18 lectures, 12 hours of practical work and 20 hours of problem solving consultancy briefs. Major topics include: structure and classification of animal viruses, epidemiology, control of viral diseases, zoonoses, vaccines, chemotherapy, host response, clinical expression and subclinical carriage of viral infections and diagnostic tests including molecular biology tests, cell culture, electron microscopy and immunodiagnosics.

Emphasis will be placed on viral diseases of cats, dogs, poultry, cattle, sheep and horses. The lecture programme is reinforced by practical work and the problem solving consultancy briefs.

Textbook

*Virology for Australian Veterinarians* (Veterinary Science Postgraduate Committee, University of Queensland, 1992)

## Veterinary Pharmacology and Toxicology V306

Dr Jill Maddison

Assessment one 90min exam/sem, class performance, assignments

A course of 56 hours of lectures and 6 hours of problem-based tutorials. In addition, 3 correlation sessions (3 hours each session) will be run in conjunction with members of other departments within the Faculty to illustrate the interaction of preclinical and clinical disciplines in solving clinical problems. The lecture course covers basic pharmacological principles and clinical veterinary pharmacology. The interactive workshops address topics of particular relevance to veterinary pharmacology.

Textbooks

B.G. Katzung (ed.) *Basic and Clinical Pharmacology* 4th edn (Appleton & Lange, 1989)

A.A. Seawright *Animal Health in Australia Vol. 2. Chemical and Plant Poisons* (Australian Government Publishing Service, 1982)

Study Aids

R. Einstein *Pharmacology, Self-assessment Questions for Students* 2nd edn (Butterworths, 1989)

Reference books

G.C. Brander *et al.* *Veterinary Applied Pharmacology and Therapeutics* 5th edn (Bailliere Tindall, 1991)

B.S. Cooper (ed.) *Antimicrobial Prescribing Guidelines for Veterinarians* (Postgraduate Committee in Veterinary Science, University of Sydney, 1994)

S.L. Everist *Poisonous Plants of Australia* (Angus & Robertson, 1982)

A.G. Gilman *et al.* *Goodman and Gilman's The Pharmacological Basis of Therapeutics* 8th edn (McGraw-Hill, 1991)

*Pharmacological Basis of Veterinary Therapeutics* Proceedings 198 (Postgraduate Committee in Veterinary Science, University of Sydney, 1992)

J.F. Prescott and J.D. Baggot *Antimicrobial Therapy in Veterinary Medicine* (Blackwell, Boston, 1993)

## Animal Nutrition V321

Prof. Fraser

A course of 36 lectures concerned with the principles and practice of nutrition.

Textbook

P. McDonald *et al.* *Animal Nutrition* 4th edn (Longmans, 1988)

Reference books

K. Blaxter *Energy Metabolism in Animals and Man* (Cambridge U.P., 1989)

D. Cole *Recent Developments in Pig Nutrition 2* (Nottingham U.P., 1993)

C. Fisher and K.N. Hoorman *Nutrient Requirements of Poultry and Nutritional Research* (Butterworths, 1986)

W. Mertz (ed.) *Trace Elements in Human and Animal Nutrition* Vols 1 and 2 5th edn (Academic Press, 1987)

National Academy of Sciences, Washington *Nutrient Requirements of Domestic Animals* (a series of pamphlets on individual animals)

T. Tsuda *et al.* *Physiological Aspects of Digestion and Metabolism in Ruminants* (Academic Press, 1991)

15

## Veterinary Medicine V323

Assoc. Prof. Watson

A course of 36 lectures in second semester on veterinary medicine and diseases of organ systems of animals, including clinical methods and techniques of examination. Diseases of organ systems of the dog and cat are discussed. Attempts are made to integrate knowledge of anatomy, physiology, biochemistry, pharmacology, pathology, genetics and nutrition. The lectures may be illustrated with clinical material from the Veterinary Teaching Hospital.

Textbook

R.W. Nelson and C.G. Couto (eds) *Essentials of Small Animal Internal Medicine* (Mosby, 1992)

Reference books

J.D. Bonagura (ed.) *Kirks Current Veterinary Therapy XII* (Saunders, 1995)

E.A. Chandler *et al.* (eds) *Canine Medicine and Therapeutics* 3rd edn (Blackwell, 1992)

E.A. Chandler *et al.* (eds) *Feline Medicine and Therapeutics* 2nd edn (Blackwell, 1994)

A. de Lahunta *Veterinary Neuroanatomy and Clinical Neurology* 2nd edn (Saunders, 1983)

N.J. Edwards *Bolton's Handbook of Canine and Feline Electrocardiography* 2nd edn (Saunders, 1987)

S.J. Ettinger and E.C. Feldman (eds) *Textbook of Veterinary Internal Medicine* 4th edn (Saunders, 1995)

E.C. Feldman and R.W. Nelson *Canine and Feline Endocrinology and Reproduction* (Saunders, 1987)

C.E. Greene (ed.) *Infectious Diseases of the Dog and Cat* (Saunders, 1990)

M.D. Lorenz and L.M. Cornelius (eds) *Small Animal Medical Diagnosis* 2nd edn (Lippincott, 1993)

M.D. Lorenz *et al.* (eds) *Small Animal Medical Therapeutics* (Lippincott, 1992)

G.H. Muller *et al.* (eds) *Small Animal Dermatology* 4th edn (Saunders, 1989)

C.A. Osborne and D.R. Finco (eds) *Canine and Feline Nephrology and Urology* (Williams and Wilkins, 1995)

R.G. Sherding (ed.) *The Cat Diseases and Clinical Management* 2nd edn (Churchill Livingstone, 1994)

D.R. Strombeck and W.G. Guilford *Small Animal Gastroenterology* 2nd edn (Stonegate, 1990)

### Veterinary Surgery V328

Dr Darien Lawrence

Study of veterinary surgery extends over three years and provides theoretical and practical instruction in the principles of surgery, obstetrics, anaesthesia and radiology in both large and small domestic animals.

Instruction in veterinary surgery commences in the third year with a course of 26 lectures in second semester. Topics covered include: the principles of aseptic surgery; plastic, reconstructive and oncologic surgery; radiography, ultrasonography and radiation oncology; and anaesthesia, in preparation for entry to the Veterinary Teaching Hospital in fourth year. An equivalent time in the third year is also devoted to practical instruction in these subjects.

#### Textbooks

L.W. Hall and K.W. Clarke *Veterinary Anaesthesia* (Bailliere Tindall, 1991)

CD. Knechtel *et al.* *Fundamental Techniques in Veterinary Surgery* 3rd edn (Saunders, 1987)

Kodak *The Fundamentals of Radiography* (Eastman Kodak Co., 1980)

D. Slatter *Textbook of Small Animal Surgery* 2nd edn (Saunders, 1993)

#### Reference books

E.E. Peacock *Wound Repair* 3rd edn (Saunders, 1986)

G.D. Ryan *Radiographic Positioning of Small Animals* (Lea & Febiger, 1981)

S.F. Swaim and R.A. Henderson *Small Animal Wound Management* (Lea & Febiger, 1990)

J.W. Ticer *Radiographic Technique in Small Animal Practice* 2nd edn (Saunders, 1984)

R.G. Warren *Small Animal Anaesthesia* (Mosby, 1983)

J.B. West *Respiratory Physiology—The Essentials* 3rd edn (Williams & Wilkins, 1979)

### Veterinary Parasitology V314

Dr Collins

A study of the major parasitic diseases of the companion animals: dogs, cats, horses, cage birds and aquarium fish. The course of 52 hours covers the structure and biology of helminth, arthropod and protozoal parasites, but the emphasis is on the pathogenesis, diagnosis, epidemiology, treatment and control of parasitic diseases. Educational objectives are used to assist learning; assessment is based on these objectives and comprises a group project, contributory tests and final practical and written examinations.

#### Teaching manual

G.H. Collins *Veterinary Parasitology* (latest edn)

## Fourth year courses

### Veterinary Parasitology V426

Dr Collins

A study of the economically important parasitic diseases of commercial animals: cattle, sheep, goats, pigs, poultry, bees and farmed fish. The course of 54 hours emphasises the importance of clinical and sub-clinical parasitic diseases as constraints on agricultural production and shows how knowledge of the epidemiology of these diseases is used in planning control measures. Educational objectives are used to assist learning; assessment is based on these objectives and comprises a group project, contributory tests and final practical and written examinations.

#### Teaching manual

G.H. Collins *Veterinary Parasitology* (latest edn)

### Veterinary Clinical Pathology V404

Assoc. Prof. Canfield

A course of lectures, demonstrations, practical classes and seminars during fourth year deals with the practical application of pathological, biochemical, haematological, microbiological and parasitological techniques to clinical aspects of veterinary science.

Practical work includes the examination of specimens taken from living animals by techniques in the above fields. Special attention is given to the application and interpretation of tests used in the diagnosis of disease.

#### Reference books

R.K. Archer and L.B. Jeffcott *Comparative Veterinary Clinical Haematology* (Blackwell, 1986)

E.H. Coles *Veterinary Clinical Pathology* 4th edn (Saunders, 1986)

J.R. Duncan and K.W. Prasse *Veterinary Laboratory Medicine* 3rd edn (Iowa State U.P., 1994)

J.J. Kaneko *Clinical Biochemistry of Domestic Animals* (Academic Press, 1989)

N.C. Jain *Schalm's Veterinary Haematology* (Lea & Febiger, 1986)

### Veterinary Medicine V405

Assoc. Prof. Watson

The course commenced in third year continues through the two semesters of fourth year. Lectures (36) on diseases of various organ systems constitute the didactic component given in first semester. The course is based on dogs and cats, with reference to other animal species as necessary.

Practical work in the Veterinary Teaching Hospital is undertaken using clinical case material and case illustrated tutorials are given during both semesters.

#### Textbook

R. W. Nelson and C.G. Couto (eds) *Essentials of Small Animal Internal Medicine* (Mosby, 1992)

#### Reference books

As for third year Veterinary Medicine

## Veterinary Surgery V407

Dr Darien Lawrence

The course of 98 lectures includes the surgical diseases and affections of domestic animals. These are arranged with emphasis on a systematic approach giving consideration to the alimentary, musculoskeletal, respiratory, urogenital, cardio-vascular, nervous, special senses, cutaneous and endocrine systems of the body.

Training is given by lectures and demonstrations in the principles of antisepsis and aseptic surgery, in the pathophysiology of surgical diseases, in the technique of operative surgery and in anaesthesia, radiography and radiology. Surgical techniques are practised under supervision in 60 hours of formal practical classes. Students assist in the surgery and after-care of animals in the veterinary hospital on a roster system as part of their clinical work.

The course of instruction in veterinary anaesthesia covers the theory and practice of general anaesthesia and of local and regional analgesia. The student studies the pre-operative assessment of the anaesthetic patient in addition to the recognition and management of post-operative anaesthetic complications. Fluid therapy and intensive care of both surgical and medical cases are undertaken.

Instruction in the use of radiology as an aid to clinical diagnosis in diseases of the different body systems is given. Examination of clinical cases, practical classes and tutorials will provide an introduction to radiological diagnosis and cover further aspects of radiography, radiation protection, ultrasonography and radiation oncology.

### Textbooks

- G.S. Allan *Radiology Symposium Proceedings No. 203* (Postgraduate Committee in Veterinary Science, University of Sydney, 1992)
- W.O. Brinker *et al. Handbook of Small Animal Orthopaedics and Fracture Treatment* (Saunders, 1990)
- L.W. Hall and K.W. Clarke *Veterinary Anaesthesia* (Bailliere Tindall, 1991)
- CD. Knecht *et al. Fundamental Techniques in Veterinary Surgery* (Saunders, 1987)
- D.L. Piermattei and R.G. Greeley *An Atlas of Surgical Approaches to the Bones of the Dog and Cat* (Saunders, 1979)
- R.J. Rose and D.R. Hodgson *Manual of Equine Practice* (Saunders, 1993)
- D. Slatter *Textbook of Small Animal Surgery* 2nd edn (Saunders, 1993)
- D.E. Thrall *Textbook of Veterinary Diagnostic Radiology* (Saunders, 1993)

### Reference books

- J. Archibald *Canine and Feline Surgery* (1984)
- G.H. Arthur *et al. Veterinary Reproduction and Obstetrics* (1983)
- R.S. Atkinson *et al. A Synopsis of Anaesthesia* (Wright, 1987)
- J. Auer (ed.) *Equine Surgery* (Saunders, 1992)
- J. Beech (ed.) *Equine Respiratory Disorders* (Lea & Febiger, 1991)
- A.G. Binnington and J.R. Cockshutt (eds) *Decision Making in Small Animal Soft Tissue Surgery* (B.C. Decker, 1988)
- J. Bojrab *Pathophysiology in Small Animal Practice* 2nd edn (Lea & Febiger, 1993)
- M.J. Bojrab *Current Techniques in Small Animal Surgery* (Lea & Febiger, 1990)

- W.O. Brinker *et al. Manual of Internal Fixation in Small Animals* (Springer-Verlag, 1983)
- H.R. Denny *Guide to Canine Orthopaedics* 3rd edn (Blackwell Scientific, 1993)
- S.P. Di Bartola *Fluid Therapy in Small Animal Practice* (Saunders, 1992)
- J. Dik and I. Gunsser *Atlas of Diagnostic Radiology in the Horse* Vols 1, 2 and 3 (Saunders, 1988)
- E.L. Gillette *et al. Carlson's Veterinary Radiology* (Lea & Febiger, 1977)
- B.F. Hoerlein *Canine Neurology Diagnosis and Treatment* (Saunders, 1978)
- P.B. Jennings *The Practice of Large Animal Surgery* Vols I and II (Saunders, 1984)
- C.W. McIlwraith *Diagnostic and Surgical Arthroscopy in the Horse* (Veterinary Medicine Publ. Co., Karisas, 1990)
- C.W. McIlwraith and A.S. Turner *Equine Surgery Advanced Techniques* (Lea & Febiger, 1987)
- Milne and Turner *An Atlas of Surgical Approaches to the Bones of the Horse* (Saunders, 1979)
- D.A. Morrow *Current Therapy in Theriogenology* (Saunders, 1986)
- W.W. Muir and J.A.E. Hulsell *Equine Anaesthesia* (Mosby Year Book, 1991)
- Muller *et al. Manual of Internal Fixation* (Springer-Verlag, 1979)
- F.W. Oehme *Textbook of Large Animal Surgery* (Williams & Wilkins, 1988)
- R. Owen *et al. Scientific Foundations of Orthopaedics and Traumatology* (Heinemann Medical, 1981)
- R.R. Paddleford (ed.) *Manual of Small Animal Anaesthesia* (Churchill Livingstone, 1988)
- E.E. Peacock *Wound Repair* (Saunders, 1986)
- T.W. Ribold *Large Animal Anaesthesia Principles and Techniques* (Iowa State U.P., 1982)
- I.J. Roberts *Veterinary Obstetrics and Genital Diseases* (published by the author, 1986)
- N.E. Robinson (ed.) *Current Therapy in Equine Medicine 2* (Saunders, 1992)
- N.E. Robinson (ed.) *Current Therapy in Equine Medicine 3* (Saunders, 1992)
- J.R. Rooney *The Biomechanics of Lameness in Horses* (Williams & Wilkins, 1969)
- P.D. Rossdale and S.W. Ricketts *Equine Stud Farm Medicine* (Bailliere, 1980)
- H. Schebitz and H. Wilkens *Atlas of Radiographic Anatomy of the Dog and Cat* (Verlag Paul Parey, Berlin, 1986)
- H. Schebitz and H. Wilkens *Atlas of Radiographic Anatomy of the Horse* (Verlag Paul Parey, Berlin, 1988)
- C. Scurr and S. Feldman *Scientific Foundations of Anaesthesia* (Heinemann, 1983)
- S. Sevvit *Bone Repair and Fracture Healing in Man* (Churchill Livingstone, 1981)
- R.G. Sherding *Medical Emergencies* (Churchill Livingstone, 1985)
- C.E. Short (ed.) *Principles and Practice of Veterinary Anaesthesia* (Williams & Wilkins, 1987)
- D. Slatter *Fundamentals of Veterinary Ophthalmology* (Saunders, 1990)
- G.R. Sumner-Smith *Bone in Clinical Orthopaedics* (Saunders, 1982)
- S. Swaim and R.A. Henderson *Small Animal Wound Management* (Lea & Febiger, 1990)
- G.H. Theilen and B.R. Madewell *Veterinary Cancer Medicine* (Lea & Febiger, 1988)
- The Veterinary Clinics of North America* (Saunders, 1971 onwards)
- A.S. Turner and C.W. McIlwraith *Techniques in Large Animal Surgery* (Lea & Febiger, 1989)
- Veterinary Clinics of North America *Large Animal Anaesthesia* (Saunders, 1981)

- H. Wadsworth and A.P. Chanmugam *Electrophysical Agents in Physiotherapy* (Sciences Press, 1980)
- D.F. Walker and J.T. Vaughan *Bovine and Equine Urogenital Surgery* (Lea & Febiger, 1980)
- R.C. Warren *Small Animal Anaesthesia* (C.V. Mosby, 1983)
- W.G. Whittick *Canine Orthopedics* (Lea & Febiger, 1990)
- S. Withrow and E. McEwen *Clinical Veterinary Oncology* (Lippincott, 1989)

### Veterinary Anatomy III V413

Dr Hopwood

This course consists of 24 hours of demonstration and practical classes. It covers the surface anatomy and applied anatomy of the horse and dog.

#### Reference books

- A. de Lahunta and R.E. Habel *Applied Veterinary Anatomy* (Saunders, 1986)
- D.W. Milne and A.S. Turner *An Atlas of Surgical Approaches to the Bones of the Horse* (Saunders, 1979)
- D.L. Piermattei and R.G. Greeley *An Atlas of Surgical Approaches to the Bones of the Dog and Cat* (Saunders, 1979)
- J.R. Rooney *Biomechanics of Lameness in Horses* (Williams & Wilkins, 1969)
- J.A. Taylor *Regional and Applied Anatomy of the Domestic Animals: Part I—Head and Neck; Part 2—Thoracic Limb* (Oliver & Boyd, 1955-59)

### Applied Reproduction and Obstetrics V422

Assoc. Prof. Evans

A course of 36 lectures and 1 practical class concerned with applied aspects of animal reproduction and obstetrics. Topics include the normal patterns of fertility in farm animals, dogs, cats and horses, and emphasis is placed on regulation of fertility and management of reproductive disorders. Instruction is provided on pre-partum affections, parturition, dystocia, and the affections of the urogenital tract at birth. Practical experience is provided at the Veterinary Teaching Hospital in Sydney, at the Rural Veterinary Centre at Camden, and in further formal demonstrations in Fifth Year courses.

#### Reference books

- G.H. Arthur *et al. Veterinary Reproduction and Obstetrics* 7th edn (Bailliere Tindall, London, 1995)
- C.R. Austin and R.V. Short *Reproduction in Mammals* Books 1-5 2nd edn (Cambridge U.P., 1982)
- Ib.J. Christiansen *Reproduction in the Dog and Cat* (Bailliere Tindall, 1984)
- P.W. Concannon *et al.* (eds) *Dog and Cat Reproduction, Contraception and Artificial Insemination* (Journal of Reproduction and Fertility Supplement 39, 1989)
- P.W. Concannon *et al.* (eds) *Fertility and Infertility in Dogs, Cats and Other Carnivores* (Journal of Reproduction and Fertility Supplement 47, 1993)
- O.J. Ginther *Reproductive Biology of the Mare* 2nd edn (Equiservices, Wisconsin, 1992)
- I. Gordon *Controlled Breeding in Farm Animals* (Pergamon Press, 1983)
- E.S.E. Hafez *Reproduction in Farm Animals* 6th edn (Lea & Febiger, Philadelphia, 1993)
- A.O. McKinnon and J.L. Voss *Equine Reproduction* (Lea & Febiger, 1993)
- D.A. Morrow (ed.) *Current Therapy in Theriogenology* 2nd edn (Saunders, Philadelphia, 1986)

- S.J. Roberts *Veterinary Obstetrics and Genital Diseases* 3rd edn (S.J. Roberts, Woodstock, Vermont, 1986)
- V. Sloss and J. Duffy *Handbook of Bovine Obstetrics* (Williams & Wilkins, 1980)

### Animal Nutrition V421

Prof. Fraser

A course of 36 lectures on the integration of nutrition with clinical topics and applied nutrition of a variety of animals including horses, dogs, cats, fish, cage birds, laboratory and zoo animals.

#### Reference books

- D.C. Church *Livestock Feeds and Feeding* 2nd edn (Church, 1984)
- A.T.B. Edney (ed.) *Dog and Cat Nutrition* 2nd edn (Pergamon Press, 1988)
- D. Frape *Equine Nutrition and Feeding* (Longman Scientific & Technical, 1986)
- L.D. Lewis *et al. Small Animal Clinical Nutrition III* (Mark Morris Associates, Topeka, Kansas, 1987)
- National Academy of Sciences, Washington *Nutrient Requirements of Domestic Animals* (a series of pamphlets on individual animals)
- J.M. Wills and K.W. Simpson (eds) *The Waltham Book of Clinical Nutrition of the Dog and Cat* (Pergamon Press, 1994)
- L.F.M. Zutphen *et al. Principles of Laboratory Animal Science* (Elsevier, 1993)

### Animal Husbandry Practical Report

Assoc. Prof. Stone

Students are required to undertake extramural practical work in animal husbandry to enable them to master animal handling and manipulative techniques and to introduce them to activities in the various animal industries and to practical management problems. Experience is gained with various classes of livestock including beef and dairy cattle, sheep, horses, pigs and poultry. This work is documented in a practical report which is submitted for assessment in the first week of semester one of the fourth year.

## Fifth year courses

### Veterinary Surgery V505

Prof. Rose

In fifth year the surgery course consists of 14 hours of lectures or seminars on special features of surgery, radiology and anaesthesia and 60 hours of practical instruction. The practice of surgical and obstetrical techniques under supervision, and preparation of small and large animals for surgery and their after-care in the Rural Veterinary Centre, continues throughout the year.

Students are expected to reach a standard of skill enabling them to control, examine and make clinical diagnoses and undertake the treatment of the common diseases found in general practice. A three week period of practical participation in the out-patients and in-patients departments of the Veterinary Teaching Hospital at the University of Sydney, combined with three weeks in the Rural Veterinary Centre, Camden,



and periods spent with veterinary practitioners engaged in general practice, provide opportunities to reach the standard required at graduation.

#### Text and reference books

As for third and fourth year Veterinary Surgery with the additional following reference books:

- H.E. Amstutz (ed.) *Bovine Medicine and Surgery*, Vols I and II (American Veterinary Publications, 1980)  
P.T. Colahan *et al.* (eds) *Equine Medicine and Surgery* Vols I and II (American Veterinary Publications, 1991)  
T. Stashak (ed.) *Adams Lameness in Horses* (Lea & Febiger, 1986)  
N.A. White (ed.) *The Equine Acute Abdomen* (Lea & Febiger, 1990)

### Bird Health and Production V502

Assoc. Prof. Cross

This course consists of 38 lectures and 40 hours of practical classes. The aim of the course is to develop knowledge and skill in bird medicine. Emphasis is placed on the epidemiology, management and preventive medicine of intensive and extensive bird populations. Special presentations are given on rehabilitation and wildfowl, ratite and raptor medicine and surgery. To complete the course each student will need to obtain at least 50% in the final written examination. Students will be assessed during practical sessions on practical skills, knowledge, participation and presentation.

#### Reference books

- S. Leeson and J.D. Summers *Commercial Poultry Nutrition* (University Books, Guelph, Ontario, 1991)  
R.E. Moreng and J.S. Avens *Poultry Science and Production* (Reston Publishing, 1985)  
Standing Committee on Agriculture *Feeding Standards for Australian Livestock, Poultry* (CSIRO, 1987)

### Horse Medicine V503

Assoc. Prof. Hodgson

Equine medicine is presented as lectures, practical classes and by participation in clinical practice. There are 26 lectures covering medical problems in all the major body systems including equine reproduction. Lectures are presented using an approach which highlights major problems in equine medicine. Practical classes in equine reproduction, ophthalmology and neurology are held at the Faculty Horse Unit in Cobbitty and the Rural Veterinary Centre. The Rural Veterinary Centre and its laboratory provide experience in the management of a wide range of disease problems in companion animals (including horses), cattle, goats and deer. Students also participate in herd health services provided to local dairy producers.

#### Textbooks

- D.C. Blood *et al.* *Veterinary Medicine* 8th edn (Bailliere Tindall 1994)  
C.M. Brown *Problems in Equine Medicine* (Lea & Febiger, 1990)  
P.T. Colahan *et al.* *Equine Medicine and Surgery* 4th edn. (American Veterinary Publications, 1991)  
*Equine Internal Medicine* Proceedings No. 206 (Postgraduate Committee in Veterinary Science, University of Sydney; 1993)

*Equine Medicine* Proceedings No. 183 (Postgraduate Committee in Veterinary Science, University of Sydney, 1992)

- D.R. Hodgson and R.J. Rose *The Athletic Horse* (W.B. Saunders, 1994)  
A.M. Koterba *et al.* *Equine Clinical Neonatology* (Lea & Febiger, 1990)  
I.G. Mayhew *Large Animal Neurology* (Lea & Febiger, 1989)  
N.E. Robinson *Current Therapy in Equine Medicine* Vol. 3 (W.B. Saunders, 1992)  
R.J. Rose and D.R. Hodgson *Manual of Equine Practice* (W.B. Saunders, 1993)  
D.W. Scott *Large Animal Dermatology* (W.B. Saunders, 1988)  
B.P. Smith *Large Animal Internal Medicine* (Mosby, 1990)  
N.A. White II *The Equine Acute Abdomen* (Lea & Febiger, 1990)

### Pig Health and Production V526

Assoc. Prof. Love

*Classes* Sem 2: 33 lec, 8 pracs

*Assessment* 2hr exam at end Sem 2

The lectures are presented in a sequence following the three phases of production: reproduction, birth to weaning and weaning to marketing. The aim of the lectures is to deal with the common problems of pig medicine and production rather than attempt to cover the full range of possible problems. Practical classes are aimed at providing the necessary understanding and skills for pig practice.

The emphasis of the course is managing endemic disease and preventive medicine. Welfare of intensively housed pigs is also given consideration.

#### Reference books

- J. Gardner *et al.* *Pig Production in Australia* (Butterworths, 1990)  
Leman *et al.* *Diseases of Swine* 7th edn (Iowa State U.P., 1993)  
E.R. Miller *et al.* *Swine Nutrition* (Butterworth-Heinemann, 1991)  
G.M. Pesti and B.R. Miller *Animal Feed Formulation: Economics and Computer Applications* (VanNostrand Reinhold, 1993)  
*Pig Production* Proceedings No. 186 (Postgraduate Committee in Veterinary Science, University of Sydney, 1992)  
Standing Committee on Agriculture *Feeding Standards for Australian Livestock, Pigs* (CSIRO, 1987)  
C. Whittemore *The Science and Practice of Pig Production* (Longman Scientific & Technical, 1993)

### Cattle Health and Production V507

Dr English

The course in cattle health and production is an integration of material presented by the Departments of Animal Science and Animal Health. The aim of the course is to enable new graduates to participate effectively in all aspects of cattle practice including cattle medicine, herd medicine and reproduction including artificial breeding and production. There are 63 lectures and 58 hours of practical classes, with additional exposure to case material and herd health programs during clinical rotations at the Rural Veterinary Centre. The lecture course covers the medicine of systems, generalised and metabolic diseases and deficiency states. A major aim of the course is to develop an understanding of the balance between consideration of the individual cow or calf and the herd. The close links between medicine and production

must be appreciated. The methods by which disorders in herds are investigated will be covered.

The clinical nutrition of calves, dairy, extensive beef and feed lot beef cattle will be discussed in relation to tropical, temperate and sub-tropical environments. The interactions between nutrition, disease and reproduction will be examined and the impacts of nutrition on economic performance will be outlined. There will be a strong emphasis on the integration of agronomic systems with cattle health and profitability. The strategies for integrating supplementary feeding strategies with pasture management will be emphasised. The impacts of nutritional strategies on milk quality will be emphasised in 2 lectures dealing with factors influencing milk quality.

The objectives of the reproduction lectures are to produce a graduate who understands and can apply methods of oestrus synchrony and manipulation of fertility, who understands and has some familiarity with embryo transfer and who is capable of delivering cost-effective reproductive management programs to dairy farmers.

#### Textbooks

*Beef Cattle Production* Proceedings No. 68 (Postgraduate Committee in Veterinary Science, University of Sydney, 1984)

*Dairy Cattle Production* Proceedings No. 78 (Postgraduate Committee in Veterinary Science, University of Sydney, 1985)

*Dairy Medicine and Production* Proceedings No. 161 (Postgraduate Committee in Veterinary Science, University of Sydney, 1991)

O.M. Radostits *et al.* *Veterinary Medicine* 8th edn (Bailliere Tindall, 1994)

O.M. Radostits and D.C. Blood *Herd Health* (W.B. Saunders, 1985)

#### Reference books

P.C. Garnsworthy (ed.) *Nutrition and Lactation in the Dairy Cow* (Butterworths, 1988)

I. Gordon *Controlled Breeding in Farm Animals* (Pergamon Press, 1983)

C.W. Holmes and G.F. Wilson *Milk Production from Pastures* (Butterworths, 1984)

I. Lean *Nutrition of Dairy Cattle* (Postgraduate Foundation in Veterinary Science, University of Sydney, 1987)

D.A. Morrow *Current Therapy in Theriogenology 2* (W.B. Saunders, 1986)

National Research Council *Nutrient Requirements of Dairy Cattle* (National Academy of Sciences, Washington, D.C., 1989)

National Research Council *Nutrient Requirements of Beef Cattle* (National Academy of Sciences, Washington, D.C., 1984)

A.M. Nichol (ed.) *Feeding Livestock on Pasture* (N.Z. Soc. of Animal Production, Occasional Pub. No. 10, 1987)

S.J. Roberts *Veterinary Obstetrics and Genital Diseases (Theriogenology)* (pub. by author, Woodstock, Vermont, 1986)

J.H.B. Roy *The Calf* 5th edn (Butterworths, 1990)

Standing Committee on Agriculture *Feeding Standards for Australian Livestock. Ruminants* (CSIRO, 1990)

### Special Medicine V508

Dr Dixon

There are two parts to this course which comprises lectures, tutorials and assignments.

1. Clinical toxicology: the important toxicological disorders of ruminants, horses and pigs are presented with the emphasis on clinical signs, necropsy findings and epidemiology.

2. Exotic diseases: diseases which represent an external threat to the livestock industries of Australia are covered. Aspects studied include not only clinical and necropsy findings of the significant diseases but also quarantine and the responsibilities of veterinarians in an animal disease emergency.

#### Reference books

S.L. Everist *Poisonous Plants of Australia* 2nd edn (revised) (Angus & Robertson, 1981)

W.A. Geering, A.J. Forman and M.J. Nunn *Exotic Diseases of Animals. A Field Guide for Veterinarians* (Australian Government Publishing Service, Canberra, 1995)

W.T. Parsons and E.G. Cuthbertson *Narz'ous Weeds of Australia* (Inkata Press, Melbourne, 1992)

A.A. Seawright *Chemical and Plant Poisons* 2nd edn (Vol. 2 Animal Health in Australia) (Australian Government Publishing Service, Canberra, 1989)

*Veterinary Clinical Toxicology* (Postgraduate Committee in Veterinary Science, University of Sydney, 1987)

### Sheep Health and Production V519

Mr Abbott

*Classes* Sem 1: 5 lec/wk for 8 wks, 56hr prac in 2 blocks of 28hr/fin

*Assessment* one 3hr exam at end of Sem 1, assignments in prac

The course aims to develop skills and knowledge appropriate for a rural practitioner dealing with the more common disease conditions on commercial sheep farms and with controlled breeding programs. Strong emphasis on disease management of flocks rather than individual animals and preventive medicine in an economic context rather than therapy of affected animals.

Nutrition: nutritional management in sub-tropical and temperate environments, nutrient content of natural and improved pastures, strategies of supplementary feeding, use of computers in formulating nutritional advice. Reproduction: disorders of reproduction and methods of investigating poor reproductive performance, control of reproduction, artificial breeding, collection, evaluation, handling and preservation of semen, multiple ovulation and embryo transfer including the preparation of donors and recipients and the evaluation and handling of embryos. Genetics: application to commercial sheep production and to evaluation of controlled breeding strategies. Disease management: epidemiology and preventive medicine of internal and external parasites; diagnosis, control and, where appropriate, eradication of diseases from individual flocks; integration of animal health management with optimal farm management procedures.

#### Reference books

*Animal Health in Australia Series* (Australian Bureau of Animal Health, AGPS, 1981 *et seq.*)

D.C. Blood and O.M. Radostits *Veterinary Medicine* (Bailliere Tindall, 1994)

D.J. Cottle (ed.) *Australian Sheep and Wool Handbook* (Inkata Press, Melbourne, 1991)

- A.D. Donald *et al.* (eds) *The Epidemiology and Control of Gastrointestinal Parasites of Sheep in Australia* (CSIRO, Melbourne, 1978)
- J.R. Egerton *et al.* (eds) *Footrot and Foot Abscess of Ruminants* (CRC Press, Florida, 1989)
- G. Evans and W.M.C. Maxwell *Salamon's Artificial Insemination of Sheep and Goats* (Butterworths, 1987)
- I. Gordon *Controlled Breeding in Farm Animals* (Pergamon Press, 1983)
- F.H.W. Morley (ed.) *Grazing Animals* (Elsevier Scientific, Amsterdam, 1981)
- National Research Council *Nutrient Requirements of Sheep* (National Academy of Sciences, Washington, D.C., 1985)
- CM. Oldham *et al.* (eds) *Reproductive Physiology of Merino Sheep: Concepts and Consequences* (School of Agriculture, Animal Science, University of Western Australia, 1990)
- O.M. Radostits and D.C. Blood *Herd Health: A Textbook of Health and Production Management of Agricultural Animals* (W.B. Saunders, 1985)
- Sheep Proceedings No. 58* (Postgraduate Committee in Veterinary Science, University of Sydney, 1981)
- Sheep Production and Preventive Medicine Proceedings No. 67* (Postgraduate Committee in Veterinary Science, University of Sydney, 1983)
- Sheep Health and Production Proceedings No. 110* (Postgraduate Committee in Veterinary Science, University of Sydney, 1988)
- Sheep Medicine Proceedings No. 141* (Postgraduate Committee in Veterinary Science, University of Sydney, 1990)
- D.J. Stewart *et al.* (eds) *Footrot in Ruminants* (CSIRO, Division of Animal Health, Australian Wool Corporation, Melbourne, 1986)
- V. Squires *Livestock Management in the Arid Zone* (Inkata Press, Melbourne, 1981)

## Veterinary Public Health V504

Prof. Egerton

There are four components of this course—principles of epidemiology, food quality and hygiene, the zoonoses and the legal and ethical bases of veterinary work. The objective of the course is to make graduates aware of their potential for contributing directly to human welfare through controlling diseases of animals transmissible to people and through provision of high quality food. Understanding the obligations imposed by the community through acts and regulations and the self-imposed obligations arising from membership of a learned profession is an essential outcome of the course.

There are 63 hours of lectures and 27 hours of practical or tutorial work programmed for Veterinary Public Health.

### Textbooks

- Epidemiological Skills in Animal Health Proceedings No. 143* (Postgraduate Committee in Veterinary Science, The University of Sydney, 1990)
- T.B. Mephan *Physiology of Lactation* (Open University Press, Milton Keynes and Philadelphia, 1987)
- Veterinary Surgeons Act, 1987

### Reference books

- Acts and Regulations* (N.S.W. unless stated):
- Animal Research Act 1985
  - Cattle Compensation Act
  - Cattle Slaughtering Diseased Animals and Meat Act
  - Commonwealth Quarantine Act 1908

- Dog Act
- Meat Industry Act
- Pastures Protection Act
- Poisons Act
- Prevention of Cruelty to Animals Act
- Registration of Stock Brands Act
- Stock (Artificial Insemination) Act
- Stock Diseases Act
- Stock Foods and Medicine Act
- Swine Branding Act

P. Gillies *Business Law* 6th edn (Federation Press, Sydney, 1994)

W.J. Stevenson and K.L. Hughes *Synopsis of Zoonoses in Australia* 2nd edn (Commonwealth Department of Health AGPS, 1988)

M. Thrusfield *Veterinary Epidemiology* (Butterworths, London, 1985)

## Sydney University Veterinary Teaching Hospital

Dr Church, Superintendent

Students will attend the Veterinary Teaching Hospital in both semesters of fourth year and in certain periods of fifth year. In this way practical experience is obtained in both the diagnosis and treatment of medical and surgical disorders in dogs, cats and other animals. Students receive special instruction and experience in anaesthetics, surgery, radiology, post-operative care, internal medicine, therapeutics, veterinarian-client relationships and case record keeping. Students are rostered for duties within the various sections of the hospital and clinical pathology laboratory.

## Clinical Practice V500

This course integrates knowledge from lecture courses in managing cases and dealing with clients under academic supervision at the Rural Veterinary Centre (RVC). Continuing assessment will account for 80% of the allocated mark and each student will be assessed after each rotation of work at the RVC. This assessment will be based on clinical knowledge, management of case records, attitude towards, and interest, in the work of the RVC and professionalism (client and colleague relationships). At the time of the Semester II examinations each student will be examined *viva voce* and this will account for 20% of the mark.

## Rural Veterinary Centre

Assoc. Prof. Hodgson, Superintendent

During their period of residence at Camden in fifth year, students will be introduced to veterinary practice among farm and companion animals. This is achieved by practical work in groups in the ambulatory clinic, hospital and clinical pathology laboratory of the Rural Veterinary Centre. Students will be able to observe disease problems under field conditions and obtain practical experience in the application of clinical pathology techniques utilised in the investigation of these diseases.

During rotations through the various services of the Rural Veterinary Centre, students will be assessed on a weekly basis by their supervising clinician.

## Practical work requirement

Students are required to do practical work in livestock husbandry as described in the Animal Husbandry course.

During the vacation periods rostered after semester 2, fourth year, students will attend the Veterinary Teaching Hospital and Rural Veterinary Centre for practical experience in veterinary medicine and surgery. All students will spend three weeks at both locations. Students are also required to undertake specified extramural practical work which will be arranged by the Faculty Office.

22

## Essay V517

Students must satisfactorily complete an essay during the undergraduate course. The latest time acceptable for nomination and Faculty approval of the topic is the Friday before the mid-semester break in semester 2 of fourth year. Essays must be typewritten and submitted by the Friday of the first week of second semester in fifth year. However, earlier submission is recommended. Guidelines for the essay are available from the Faculty Office.

## 5 Other Faculty information

### General University information

This chapter of the handbook contains information specific to the Faculty of Veterinary Science as well as some important general information. For further information about examinations, the organisation, of the University, assistance for disabled students, child care facilities, housing, health, counselling, financial assistance, careers advice and a range of other matters, see the *University of Sydney Diary*, available free from the Student Centre or from University of Sydney Union outlets.

### Administration

#### Faculty Office

The Office of the Faculty of Veterinary Science is in the J.D. 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,
- 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.

#### Booklists

Copies of textbook and reference book lists for each year are available from the office.

#### Noticeboards

The main Faculty noticeboards are in the ground-floor corridor of the J.D. Stewart Building. These noticeboards should be checked regularly.

#### Mail collection

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

#### Lockers and change room facilities

Lockers in the J.D. Stewart Building 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 J.D. 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

#### Welcome to first year students

In Orientation week, newly-enrolled firstyear students are introduced to the Faculty. There is a short ceremony in which the Dean, Sub-Dean Student Welfare, and the President of the Veterinary Student Association, welcome the students. This is followed by a tour of the Veterinary Science precinct and a barbecue. On the following day students visit the Camden campus and receive information on Faculty and University services and facilities.

#### Academic

For academic questions affecting courses of study you should see the appropriate faculty or college office, or for questions on course content, see the lecturer concerned.

#### 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

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.

Information about examinations is displayed in the Main Quadrangle from time to time. There are also several permanent noticeboards in the Main Quadrangle area, notably beneath the Western Tower.

#### 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.

### International students

International students are required to make application to the International Office. International students already studying at schools in Australia should apply to the Universities Admissions Centre.

#### Sponsored international students

The Australian International Development Assistance Bureau (AIDAB), which is the overseas aid unit of the Australian Department of Foreign Affairs and Trade, has a responsibility for the welfare of sponsored international students and their families. The address of the Bureau in Sydney is:

2nd Floor  
'Sydney Central'  
477 Pitt Street  
Sydney 2000. Tel. (02) 9379 8888.

### ***Private international students***

Private subsidised international students should advise the Department of Employment, Education and Training (DEET) of their address and enrolment details by writing to the Overseas Student Section, PO Box 9880, Canberra, A.C.T. 2601.

Private subsidised international students continuing their studies should confirm their enrolment with the Overseas Student Section as early as possible each year in order to ensure that arrangements for the extension of their temporary entry permit can be made.

All subsidised students must advise the department if they change their semester residential address during the year. Telephone enquiries should be directed to 008 812 698 (toll-free).

### ***Private fee-paying international students***

Private fee-paying international students must advise the International Office of any changes of address. Any enquiries about fee payments, enrolments and any other problems can be made to the International Education Office on (02) 9351 4079 or 9351 4161.

### ***Advisers to international students***

The International Office has been established to help all international students with application and enrolment procedures and any other problems they may encounter.

The International Student Services Unit on the main campus and the Advisory Centre for Overseas Students (Cumberland College campus) can help with any problems arising during an international student's stay in Australia.

### **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 and physics practical classes. The lists indicating these class sections will be displayed outside the relevant laboratories before the beginning of the semester.

You must attend the classes only at the times indicated.

#### ***Attendance at lectures, and leave of absence***

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. In the case of illness your letter of application should be accompanied by a certificate from a registered medical practitioner.

Should you be absent from classes without permission you may be refused permission to take the examinations.

### ***Discontinuation***

If you are contemplating discontinuing you should consult a student counsellor before you commit yourself to a decision.

If you are enrolled for a degree in the Faculty of Veterinary Science and, without permission of the Faculty, you discontinue a year or a full-year course after the last day of the first week of second semester, or discontinue a one-semester course after the last day of the seventh week of teaching, you will be deemed to have failed such year or course.

### ***Students re-enrolling after absence***

If you were previously enrolled (even if you discontinued all courses 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 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.

## **Regulations**

### **Discontinuation of enrolment and re-enrolment after discontinuation—undergraduate**

#### ***All Faculties, Colleges and Boards of Studies***

1. A candidate for a degree of Bachelor who ceases attendance at classes must apply to the Faculty, College Board or Board of Studies concerned and will be presumed to have discontinued enrolment from the date of that application, unless evidence is produced (i) that the discontinuation occurred at an earlier date, and (ii) that there was good reason why the application could not be made at the earlier time
2. A candidate for a degree of Bachelor who at any time during the first year of attendance discontinues enrolment in all courses shall not be entitled to re-enrol for that degree unless the Faculty, College Board or Board of Studies concerned has granted prior permission to re-enrol or the person is reselected for admission to candidature for that degree.
3. Subject to paragraphs (i) and (ii) of section 1, no candidate for a degree of Bachelor may discontinue enrolment in a course or year after the end of lectures in that course or year.
4. The Dean, Pro-Dean or a Sub-Dean of a Faculty, Director or Deputy Director of a College or the Chairperson of a Board of Studies, may act on behalf of that Faculty, College Board or Board of Studies in the administration of these resolutions unless the Faculty, College Board or Board of Studies concerned decides otherwise.

*Withdrawal from full-year and First Semester courses*

5. A candidate for a degree of Bachelor who discontinues enrolment in a full-year or First Semester course on or before 30 March in that year shall be recorded as having withdrawn from that course.

*Withdrawal from Second Semester courses*

6. A candidate for a degree of Bachelor who discontinues enrolment in a Second Semester course on or before 30 August in that year shall be recorded as having withdrawn from that course.

**All Faculties, Colleges and Boards of Studies except the Faculty of Engineering**

*Discontinuation*

7. (1) A discontinuation of enrolment in a course shall be recorded as 'Discontinued with Permission' when the discontinuation occurs after the relevant withdrawal period and
- on or before the Friday of the first week of Second Semester for a full-year course, or
  - up to the last day of the seventh week of teaching in a one semester course.
- (2) A discontinuation of enrolment in a course shall be recorded as 'Discontinued' when the discontinuation occurs
- after the Friday of the first week of Second Semester for a full-year course, or
  - after the last day of the seventh week of teaching in a one semester course.
- (3) Notwithstanding paragraph (2) the Dean, Pro-Dean or Sub-Dean of the Faculty, Director or Deputy Director of the College or Chairperson of the Board of Studies concerned may determine that a discontinuation of enrolment should be recorded as 'Discontinued with Permission' on the grounds of serious ill-health or misadventure.

**Discontinuation of enrolment and readmission after discontinuation—postgraduate**

**All Faculties, Colleges, Boards of Studies and Graduate Schools—all candidates**

1. A candidate will be presumed to have discontinued enrolment in a course, degree or diploma from the date of application to the Faculty, College Board, Board of Studies or Graduate School concerned, unless evidence is produced (i) that the discontinuation occurred at an earlier date, and (ii) that there was good reason why the application could not be made at the earlier time.
2. A candidate who at any time discontinues enrolment from a degree or diploma shall not be entitled to re-enrol in that degree or diploma unless the candidate is readmitted to candidature for that degree or diploma.
3. Subject to paragraphs (i) and (ii) of section 1, candidates may not discontinue enrolment in a course after the end of classes in that course, unless the degree or diploma regulations permit otherwise.
4. The Dean, Pro-Dean or a Sub-Dean of a Faculty, Director or Deputy Director of a College, Chairperson of a Board of Studies or a Chairperson of a Graduate

School may act on behalf of that Faculty, College, Board of Studies or Graduate School in the administration of these resolutions.

**Candidates proceeding mainly by coursework**

*Withdrawal from full-year and First Semester courses*

5. A candidate for a degree or diploma who discontinues enrolment in a full-year or First Semester course on or before 30 March in that year, shall be recorded as withdrawn from that course.

*Withdrawal from Second Semester courses*

6. A candidate for a degree or diploma who discontinues enrolment in a Second Semester course on or before 30 August in that year, shall be recorded as withdrawn from that course.

*Discontinuation*

7. A candidate for a degree or diploma who discontinues enrolment in a course after the withdrawal period but before the end of classes in that course, shall be recorded as 'Discontinued with Permission' in that course, unless the degree or diploma resolutions permit otherwise.

**Candidates proceeding mainly by thesis**

*Withdrawal*

8. A candidate who discontinues enrolment in a course or degree before the end of the fifth week of enrolment, shall be recorded as having withdrawn from that course or degree.

*Discontinuation*

9. A candidate who discontinues enrolment in a course or degree after the end of the fifth week of enrolment shall be recorded as 'Discontinued with Permission'.

**Restriction upon re-enrolment**

There are certain circumstances in which you could be asked to show good cause why you 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*. You should acquaint yourself with the resolutions relating to the studies in which you are enrolled. If you are in any doubt about your liability for exclusion following academic failure or discontinuation of courses you 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 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.

*Extract from Resolutions of the Senate relating to Restriction upon Re-enrolment*

20. (1) The Senate authorises the Faculty of Veterinary Science to require a student to show good cause why he or she should be allowed to repeat Second Year in the Faculty of Veterinary Science if he or she has already taken more than one year to qualify for admission to Second Year.

(2) The Senate authorises the Faculty of Veterinary Science to require a student to show good cause why the student should be allowed to repeat First Year in the Faculty of Veterinary Science if that student has failed all the subjects of the First Year in the Faculty of Veterinary Science or has obtained a weighted average mark of less than 40% in those subjects.

## Assessment and examinations

### Periods

There are three formal examination periods:

Period	when held	approximate duration
First semester	June	2-3 weeks
Second semester	November	3-4 weeks
Supplementary	January/ February	2 weeks

In addition, individual faculties and departments may examine at other times and by various methods of assessment, such as essays, assignments, viva voce, practical work, etc. Some departments do not examine during the first semester.

### Supplementary examinations

Supplementary examinations, which are held in January/February, maybe granted by a faculty, college or board of studies:

- (a) to candidates who have been prevented by duly certified illness or misadventure from, completing an examination, or
- (b) to candidates who have failed in any examination, but whose work is deemed sufficient to warrant the concession of a further test.

Supplementary examinations should be regarded as distinct privileges, not as rights.

### Timetables

Draft timetables are displayed in the Main Quadrangle, approximately 3-4 weeks before the commencement of examinations. Notice will be given in the *News* and on departmental noticeboards. 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.

## Notification of examination results

The results of annual examinations are displayed on noticeboards in the Main Quadrangle. Also they are posted through the mail service directly to you at the end of the year.

### Disclosure of examination marks

Final marks will appear on your annual result notice. Marks may also be obtained from your faculty for the major 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 course. This does not apply to examination papers which involve the repeated use of the same material in successive examinations.

Examination marks (as opposed to examination grades) are treated as personal information and therefore disclosed only to the student concerned. However, information will be made available to help you gauge your comparative performance in class.

### Examination grades

Each subject taken will be allotted one of the following grades at the annual examinations:

Grade	per cent
High Distinction	85-100
Distinction	75-84
Credit	65-74
Pass	50-64
Fail	below 50

### Award of examination grades

It is important to note that the University does not use a set formula for determining the number of specific examination grades to be awarded in particular subjects. However there is a policy of the Academic Board on trying to achieve equity between faculties on the number of *merit* grades to be awarded in subjects. This policy is printed below.

"The following proportions of merit grades to be awarded in each subject are provided to examiners as indicative only. *They are certainly not to be considered as quotas.* The proportions have been refined over the years to provide a basis for equity of examination results between faculties, particularly the 'generalist' faculties of Arts, Economics and Science. Equity of examination results is important in its own right, but is crucial when Honours students are being considered for the award of Commonwealth Postgraduate Scholarships. Please note that the proportions are cumulative and are based on the number of students who gain a Pass or better in the particular subject.

	% High Distinction	% Distinction +	% Credit +
First year courses	3	14	42
Second year courses	3	16	46
Third year courses	4	18	50



The proportions of merit grades may vary from course to course and from year to year, reflecting different capabilities of different groups. Any variations will be compared with previous years and the proportions will continue to be refined in the light of experience.'

### Illness or misadventure

(Please contact the Faculty Office for full details of application procedure.)

You may apply (in writing) for special consideration of your examination performance on grounds of illness or misadventure. In the case of *illness* a medical certificate should be provided. The minimum requirements of a medical certificate are that it:

- (a) be submitted and signed by your own medical practitioner and indicate the dates on which you sought attention;
- (b) certify unambiguously a specified illness or medical disability for a definite period;
- (c) indicate the degree of your incapacity, and express a professional opinion as to the effect of your illness on your ability to take an examination.

Certificates in connection with annual or supplementary examinations should be submitted prior to the examinations, unless the illness or misadventure takes place during the examinations, in which case the evidence must be forwarded as soon as practicable, and in any case before the close of the examination period. There is a special form available at the Student Centre and at the University Health Service for submission with medical certificates.

For consideration on the grounds of *misadventure*, your application must include a full statement of circumstances and any available supporting evidence.

Should you find it embarrassing to state your difficulties in writing you should arrange an interview with the Dean of the Faculty.

### 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 course, 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 Counselling Service, and of the University Health Service, are all available for consultation and can give advice on appropriate action to take.

## Libraries

### Badham Library

Badham Library holds most of the material needed by veterinary science staff and students, especially in the later years of their courses. The Library covers the fields of agriculture, plant industry and agricultural economics, botany, zoology, genetics and veterinary science.

The Library is open during semester from Monday to Thursday between 8.30 am and 7.30 pm, on Friday

between 8.30 am and 6.00 pm and on Saturday between 10.00 am and 5.00 pm. Vacation hours vary and are posted in the Library.

Other libraries containing material of use to veterinary science students are Fisher Library (first-year students) and the Hector Geddes Library at the University farms, Camden.

Books, but not periodicals, may be borrowed from these libraries. Use of reserve material is for limited periods only. Photocopying facilities are available.

## 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 dinner, an annual dance and end-of-semester social gatherings, and arranges for the regular delivery of addresses on general and scientific topics. The journal of the society, *Centaur*, is published each year (see below).

### Veterinary School Common Rooms

The object of the Veterinary School Common Rooms is to provide a place to meet members of the teaching staff, postgraduates and other undergraduate students, and a place where they can meet other members of the University and visitors. Light meals and refreshments for members and their guests are available.

## Publications

### *Centaur*

*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 toward the end of the year.

## Scholarships and prizes: undergraduate

The following is a summary only. For further information contact the Scholarships Office.

Scholarship or prize,	Value .\$	Qualifications
<i>Matriculation</i>		
Alexander Donald	250	Student from Sydney Grammar School
Martin McIlrath	500	Male student—preference to sons of ex-servicemen
<i>Undergraduate</i>		
Australian College of Veterinary Scientists (Chapter of Veterinary Pharmacology)	plaque	Proficiency in Veterinary Pharmacology and Toxicology
Australian Small Animal Veterinary Association Prize	300 + medal + 2 yrs membership	Proficiency in small animal medicine and surgery
Australian Society for Parasitology	200	Proficiency in 4th year Veterinary Parasitology
Auxiliary to the Australian Veterinary Association (N.S.W. Division) Prize	80	Proficiency in Biochemistry and Veterinary Physiology in 2nd year and 3rd year
Australian Veterinary Association Auxiliary to the Australian Veterinary Association (N.S.W. Division) Prize in Veterinary Clinical Pathology	book 50 (voucher)	Proficiency in Veterinary Pathology Proficiency in 4th year Veterinary Clinical Pathology
Auxiliary to the Australian Veterinary Association (N.S.W. Division) Prize for Third Year students	50 (books)	Greatest improvement in 3rd year after having passed 2nd year with more than 60%
Auxiliary to the Australian Veterinary Association (N.S.W. Division) Prize in Animal Genetics	50	Proficiency in Animal Genetics
Baker & Ridley Memorial	150	Proficiency in 4th year Animal Husbandry Practical Report
H.G. Belschner	100	Proficiency in 1st year in sheep and wool
Bloodhorse Breeders' Association of Australia (N.S.W. Division)	100	Proficiency in 5th year in Equine Medicine and Surgery and the equine clinical assessment
Rex Butterfield Prize in Veterinary Anatomy	50	Proficiency in 2nd year in Veterinary Anatomy
H.R. Came Prize and Medal	100 + medal	Proficiency in the examinations for the degree of Bachelor of Science (Veterinary)
Commonwealth Bureau of Animal Health	40	Proficiency in 4th year in Veterinary Surgery
Cooper Australia Ltd.	225	Proficiency in 4th year in Veterinary Parasitology
C.W. Emmens Prize in Veterinary Physiology	100	Highest aggregate marks in 2nd and 3rd year Veterinary Physiology in sequential years
Farr Memorial	50	Proficiency in 1st year in horse husbandry
Friskies Pet Care Prize in Animal Nutrition	300	Proficiency in 3rd year in principles of nutrition
N.P.H. Graham	200	Proficiency in 5th year in the sheep component of Veterinary Medicine
John Gurner and Frederick Ebsworth	350 each (3)	Proficiency in 1st year in Chemistry, in Physics and in Biology
Robert Reeves Hodgekiss Prize for Equine Research	250	Student essay
K.G. Johnston	60	Proficiency in Veterinary Clinical Pathology
Dr J. Lamond Memorial	Bursaries	Financial need and academic merit
Lonsdale	400, 200	Proficiency in 4th year in clinical studies
William James McHugh	300	Case report in equine medicine or surgery in 4th or 5th year
Martin McIlrath	490	Proficiency by male students in all years preference to sons of ex-servicemen

Scholarship or prize	Value \$	Qualifications
Metro Farms Pty. Ltd. Prize in Pig Medicine	50	Proficiency in final year in pig medicine
Jack Moran	20	Proficiency in meat inspection in Veterinary Public Health
Virginia Osborne	250	Proficiency in 2nd year in anatomy of the horse
W.R. Sidman Memorial Prize— awarded by N.S.W. Division of Australian Veterinary Association	3 yrs membership of Australian Veterinary Assoc.	Proficiency in 4th year in clinical studies
Beri Sinkovic Poultry Medicine Prize	200	Proficiency in 5th year in poultry medicine
Stewart	180	Proficiency in 4th year in veterinary medicine
J.D. Stewart	60	Student essay
S.T.D. Symons	500	Proficiency in final year in clinical subjects
Uncle Ben's of Australia Pty Ltd	50	Proficiency in 4th year in small animal medicine
WIRES Wildlife Prize	250	Best final year essay relating to Australian native wild life

### Mathematics Learning Centre

The Mathematics Learning Centre offers help to students who enter the University with insufficient preparation in mathematics to enable them to cope with the mathematical requirements of their chosen course.

Older students who may not have done mathematics for several years and some overseas students may need some help with biometry in first year Veterinary Science. If you are doubtful whether you are well enough prepared for a course, you should contact the Mathematics Learning Centre for advice.

The Centre can help you decide which topics you need to do extra work on. It provides resources for individual study, with guidance from tutors.

#### Location

The Centre is on the fourth floor of the Carslaw building. Any student seeking assistance should call at the Centre, or phone 9351 4061.

### 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.

## 6 Postgraduate study

### Higher degrees and postgraduate diplomas Higher degrees

The higher degrees in the Faculty of Veterinary Science are:

- MScVetSc—Master of Science in Veterinary Science
- MVSc—Master of Veterinary Science
- MVetClinStud—Master of Veterinary Clinical Studies
- MVetStud—Master of Veterinary Studies
- PhD—Doctor of Philosophy
- DVSc—Doctor of Veterinary Science

The regulations covering the award of these degrees are printed in the University's *Calendar, Vol. I: Statutes and Regulations*. Prospective candidates should consult with the Head of the Department 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.

#### **Master of Science in Veterinary Science**

Persons holding the degree of bachelor with first or second class honours 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 courses 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 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.

#### **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 Radiology and Diagnostic Imaging, Veterinary Anaesthesia, Avian Health and Production, Wildlife Medicine and Husbandry and Zoo Animal and Wildlife Pathology. 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 areas of Avian Health and Production and Veterinary Radiology and Diagnostic Imaging, 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 Husbandry 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 for this degree shall, for a period of not less than one year, follow as a full-time student such courses of study and pass such examinations as the Faculty, on the recommendation of the Head of the Department or departments concerned, may prescribe. A part-time candidate for this degree shall for a period of not less than two years, follow such courses of study and pass such examinations as the Faculty, on the recommendation of the Head of the Department or departments concerned, may prescribe.

A candidate for the degree in the subject area of Veterinary Pathology shall pass written and/or oral examinations in each of the following subjects:

- Clinical pathology,
- Bacteriology,
- Pathology,
- Veterinary parasitology, and
- Virology.

A candidate for the degree in the subject area of Veterinary Radiology and Diagnostic Imaging shall pass written and/or oral examinations in each of the following subjects:

- Physics of diagnostic imaging,
- Radiobiology and radiation protection,
- Anatomy and physiology considered in relation to diagnostic imaging,
- Interpretation of clinical images, and
- Radiation therapy.

A candidate for the degree in the subject area of Veterinary Anaesthesia shall pass written and/or oral examinations in each of the following:

Part 1

*Written and practical examinations*

Anatomy, physiology, biochemistry and physics considered in relation to anaesthesia and intensive care, and

Pharmacology of drugs used for and in association with anaesthesia and intensive care.

Part 2

*Written, clinical and practical examinations*

The theory and practice of general anaesthesia,

The theory and practice of regional anaesthesia,

Pre-operative assessment, preparation and medication, and the recognition and management of post-operative complications in so far as they are related to anaesthesia and surgery, and

Fluid therapy and management of cases requiring intensive care.

A candidate for the degree in the subject area of Avian Health and Production shall pass written and/or oral examinations in each of the following subjects:

Epidemiology,

Therapeutics,

Medicine, and

Surgery.

A candidate for the degree in the subject area of Wildlife Medicine and Husbandry shall:

- (a) complete satisfactorily and submit a report on an approved full-time program of study of at least one semester's duration at an institution which is concerned with the maintenance and care of wildlife and has been approved by the Faculty; and
- (b) present a report embodying the results of an original investigation carried out on a full-time basis over not less than one semester in the University of Sydney or at an institution which is concerned with the maintenance and care of wildlife and has been approved by the Faculty; or complete satisfactorily a report, including a case report, on an approved full-time program of study of at least a further one semester at an institution as described in section (a); and
- (c) pass written and/or oral examinations that encompass the following subjects:  
Management of captive animals,  
Management of free living wildlife,  
Zoological medicine,  
Diseases of free living wildlife, and  
Nutrition and reproduction of wildlife.

The Faculty shall appoint a suitably qualified person to act as a supervisor of each candidate for the degree.

A candidate for the degree in the subject area of Zoo Animal and Wildlife Pathology shall:

- (a) present a report embodying the results of animal cases examined while at the institution of study;
- (b) present a seminar based on a case or cases examined while at the institution of study; and

- (c) pass a viva voce examination in each of the following subject areas:

The theory of general pathological principles, and

The theory of diseases affecting zoo animals and wildlife.

The practical aspects of necropsy technique, general laboratory techniques and histopathological skills.

*Doctor of Philosophy*

Graduates who hold the degree of Master of Veterinary Science, Master of Veterinary Clinical Studies, 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 an examination at an equivalent standard. 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.

*Postgraduate diploma*

The Faculty awards the following postgraduate diploma

- DipVetClinStud Diploma in Veterinary Clinical Studies.

## Scholarships: postgraduate

The following is a summary only. For further information contact the Scholarships Office.

Scholarship	Value \$	Closing date	Qualifications
<b>1. Restricted to Veterinary Science postgraduates</b>			
Lionel Lonsdale Clinical Fellowships	16 500 Jnr 22 500 Snr	As advertised	For research at Sydney Veterinary Teaching Hospital and Clinic in diseases of domestic animals
F.H. Loxton Postgraduate Studentships	equivalent to APA	15 November	Male graduates of any university for research in veterinary science
Sara and Anne Payten Canine Cancer Research Fund	As recommended Head of Dept of Vet.Clin.Sciences	As advertised	Postgraduate study and research
Jean Walker Trust Fellowships	equivalent to APA	15 November	Postgraduate study and research
Jean Walker Trust Supplementary Fellowships	maximum 5000	15 November	Postgraduate study and research
James Ramage Wright Research Scholarships	maximum 5000	15 November	Postgraduate study and research into the problems of animal production
<b>2. Other awards open to Veterinary Science postgraduates</b>			
<i>(a) Tenable at the University of Sydney</i>			
Australian Postgraduate Awards (APA)	15 364 per annum for higher degree	October	Open to permanent residents of Australia by research
<i>(b) Travelling scholarships</i>			
Harriett Beard Scholarship	9000	November	Postgraduate study and research in physical sciences—engineering, veterinary science and dentistry
Boulton Postgraduate Scholarship	9000	November	Postgraduate study or research for graduates educated within the Australian public educational system
C.G. Heydon Travelling Fellowship	10 500	November	Postgraduate study or research in biological sciences at overseas institutions
William and Catherine McIlrath Scholarship	25 000	November	Postgraduate study or research overseas within four years after qualification for the first degree appropriate to the proposed course of study overseas
J.B. Watt Travelling Scholarship	9000	November	Postgraduate study or research overseas within four years after qualification for the first degree appropriate to the proposed course of study overseas
Eleanor Sophia Wood Travelling Fellowships	35 000	November	Postgraduate study or research overseas

<b>Scholarship</b>	<b>Value \$</b>	<b>Closing date</b>	<b>Qualifications</b>
Eleanor Sophia Wood Postgraduate Research Travelling Scholarship	9000	November	Postgraduate study or research overseas within four years after qualification for the first degree appropriate to the proposed course of study overseas
<i>(c) Grants-in-aid</i>			
<b>Restricted to Veterinary Science postgraduates</b>			
Sir Ian Clunies Ross Scholarship	up to 500	End February	Postgraduate candidature related to research in the wool industry
N.P.H. Graham Scholarship	up to 500	End February	Postgraduate candidature related to research in sheep medicine
Goldia and Susie Lesue Scholarship	up to 3000	End February	Postgraduate candidature in the Department of Veterinary Clinical Sciences
Neil and Allie Lesue Scholarship	up to 3000	End February	Postgraduate candidature in the Department of Veterinary Clinical Sciences
Eric Horatio Maclean Scholarships	up to 1000	End February	Postgraduate candidature
Stock and Meat Industries Grant-in-Aid	up to 750	End February	Postgraduate candidature in research related to the Stock and Meat Industries
<i>Other grants-in-aid open to Veterinary Science postgraduates</i>			
Royston George Booker Scholarships	up to 1000	31 May	Postgraduate study or research overseas
Herbert Johnson Travel Grants	up to 1000	31 May	Postgraduate study or research overseas
J. Kentley Memorial Scholarship	up to 1000	31 May	Postgraduate study or research
James King of Irrawang Travelling Scholarship	up to 1000	31 May	Postgraduate study or research overseas
G.H.S. and I.R. Lightoller Scholarship	up to 1000	31 May	Postgraduate study or research overseas

## 7 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, totalling 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 two departments, of the Faculty of Veterinary Science and the Department of Agronomy of the Faculty of Agriculture. The faculty departments with major responsibilities at Camden are Animal Science and Animal Health. These departments are based in the J.L. Shute Building on Werombi Road. They have several major teaching and research units on nearby areas of the Corstorphine Centre. The Department of Animal Science has developed laboratories and other facilities for research in dairy cattle, poultry, sheep and meat. The Rural Veterinary Centre is a major component of the Department of Animal Health. It is a mixed veterinary practice, providing services to the district. As well as teaching undergraduate students and postgraduates in clinical subjects, the Department of Animal Health is responsible for the management of the J.B. Pye Farm where 1000 sheep, are kept for teaching and research. This department has also established and maintains separate pig and deer units.

In 1981 the University acquired a farm at Cobbitty. Here the Faculty of Veterinary Science has a horse breeding unit, and the Department of Animal Science's 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. They also carry about 2000 sheep/30 horses, 80 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 by various departments of the faculties at Camden. Corstorphine is also the site of the Departments of Animal Health, Animal Science, and Agronomy, which occupy the Rural Veterinary Centre, the Shute Building, the Breakwell Building, the Poultry Research Centre, the M.C. Franklin Beef Research Centre and the Dairy Research Unit. Further large animal research and teaching facilities are provided by the Department of Animal Science on May Farm, which is only 3km south of Corstorphine.

The Bringelly Farms Centre, 10km north of Corstorphine, provides extensive sheep, beef and dairy cattle facilities for the Departments of Animal Health and Animal Science. 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 in different departments, 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 Rural Veterinary Centre, staffed by the Department of Animal Health, in addition to offering a veterinary service for the district, provides clinical training for fifth year 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. In fifth year they are in residence on the farms for the whole academic year as well as for a vacation period of three weeks working in the clinic.

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.

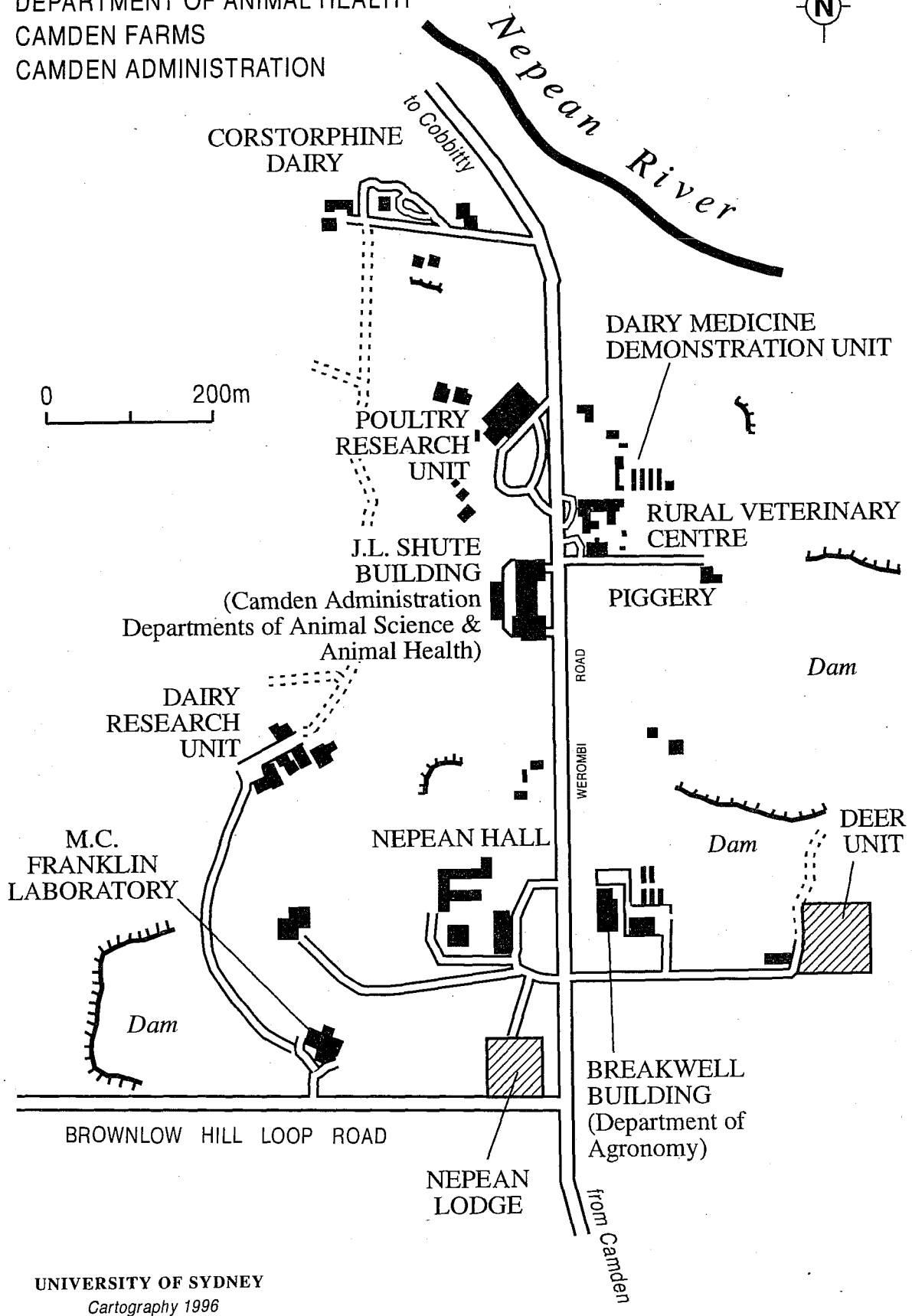
### Corstorphine

To reach Corstorphine from Sydney, take Hume Highway (not the freeway) to the Cobbitty turn-off,



# CAMDEN CAMPUS

DEPARTMENT OF ANIMAL SCIENCE  
 DEPARTMENT OF ANIMAL HEALTH  
 CAMDEN FARMS  
 CAMDEN ADMINISTRATION



which is to the right, 20 km 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 telephone numbers are:

The University of Sydney (Camden)—(046) 55 2300  
Rural Veterinary Centre—(046) 55 2000  
Students—(046) 55 0278, 55 0281, 55 0282, 55 0283, 55 0284

### Nepean Hall

In 1964 Nepean Hall was established as a Hall of Residence on the University farms at Camden for final year Veterinary Science and Agriculture students.

Nepean Hall consists of two residential wings, which accommodate 85 students in furnished single study/bedrooms. Residence in the Hall is non-compulsory but there is a high demand for places. Fees are kept at the lowest possible level with full board set at \$155.00 per week in 1996.

The Hall, with its spacious surrounds and panoramic views, offers a wide range of amenities including a recreational common room and music room, games rooms with table tennis, billiards and snooker, squash, tennis, football, television and video equipment, barbecue and supper-making facilities. In addition, there is a library adjacent to the Hall and residents are permitted conditional access to it at night.

The management of Nepean Hall is vested in the Council consisting of:

- (a) the Vice-Chancellor (*ex officio*) or nominee;
- (b) the Warden of the HaU;
- (c) the Dean of the Faculty of Veterinary Science or nominee;
- (d) the Dean of the Faculty of Agriculture or nominee;
- (e) one student elected annually by and from students in residence in Nepean Hall who are candidates for a degree or diploma in the Faculty of Veterinary Science;
- (f) one student elected annually by and from students in residence in Nepean Hall who are candidates for a degree or diploma in the Faculty of Agriculture;
- (g) two persons appointed by the Senate on the recommendation of the Council to hold office for three years from 1 January following their appointment;
- (h) the Authorised Officer;
- (i) the Professor of Animal Science and the Professor of Animal Health.

Day-to-day activities of the Hall are the responsibility of a committee elected by the residents.

### Rules

The following rules apply to students while resident in the Hall.

1. A visitor shall leave at any time if requested by the Warden.
2. A member of the Hall who is a student who commits a breach of the constitution or the rules or a

breach of discipline or misconducts him or herself in or out of the Hall:

- (a) may be fined by the Warden,
- (b) may be suspended from residence in or attendance at the Hall by the Warden for a period not exceeding one month,
- (c) may be suspended for any period by the Warden of the Hall or the Vice-Chancellor of the University,
- (d) may be fined by the Council or the Vice-Chancellor in any amount, or
- (e) may incur any penalty in accordance with academic usage which the Senate, the Proctorial Board of the University, the Council or the Vice-Chancellor or any other person authorised within the by-laws of the University may impose.

### 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 (Camden), 425 Werombi Road, Camden 2570; telephone (046) 55 2300.

Departments of Animal Health and Animal Science, 425 Werombi Road (Private Mail Bag 3), Camden 2570.

Department of Animal Health: telephone (046) 55 2301, fax (046) 55 2931.

Department of Animal Science: telephone (046) 55 2309, fax (046) 55 1331.

Rural Veterinary Centre, 410 Werombi Road, Camden 2570; telephone (046) 55 2000, fax (046) 55 1212.

Nepean Hall, 345 Werombi Road, Camden 2570; telephone (046) 55 2300.

Dog and Cat Facility, 405 Werombi Road, Camden 2570; telephone (046) 55 2178.

Horse Unit, Cobbitty Road, Cobbitty 2570; telephone (046) 51 2283.

John Bruce Pye Farm, Greendale Road, Bringelly 2171; telephone (047) 74 8212.

Lansdowne Farm, Cobbitty Road, Camden, 2570; telephone (046) 51 2328.

May Farm, May Farm Road, Mt Hunter, Camden 2570; telephone (046) 54 5239.

McGarvie Smith Animal Husbandry Farm, Elizabeth Drive, Badgery's Creek, 2171; telephone (047) 74 8184.

Plant Breeding Institute, Cobbitty Road, Cobbitty 2570; telephone (046) 51 2600, fax (046) 51 2578.

Wolverton Dairy Farm, Greendale Road, Bringelly 2171; telephone (047) 74 8013.

## 8 Foundations

### Postgraduate Foundation in Veterinary Science

The purpose of the Foundation has been to fund postgraduate continuing veterinary education. The Foundation raises funds 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.

### 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.

### J.D. Stewart Veterinary Science Foundation

The establishment of the J.D. Stewart Veterinary Science Foundation was approved by Senate in March 1986.

The Foundation was established to promote veterinary research at the University of Sydney; however, its prime objective has been to raise funds for the construction of a new building to house the Department of Veterinary Pathology.

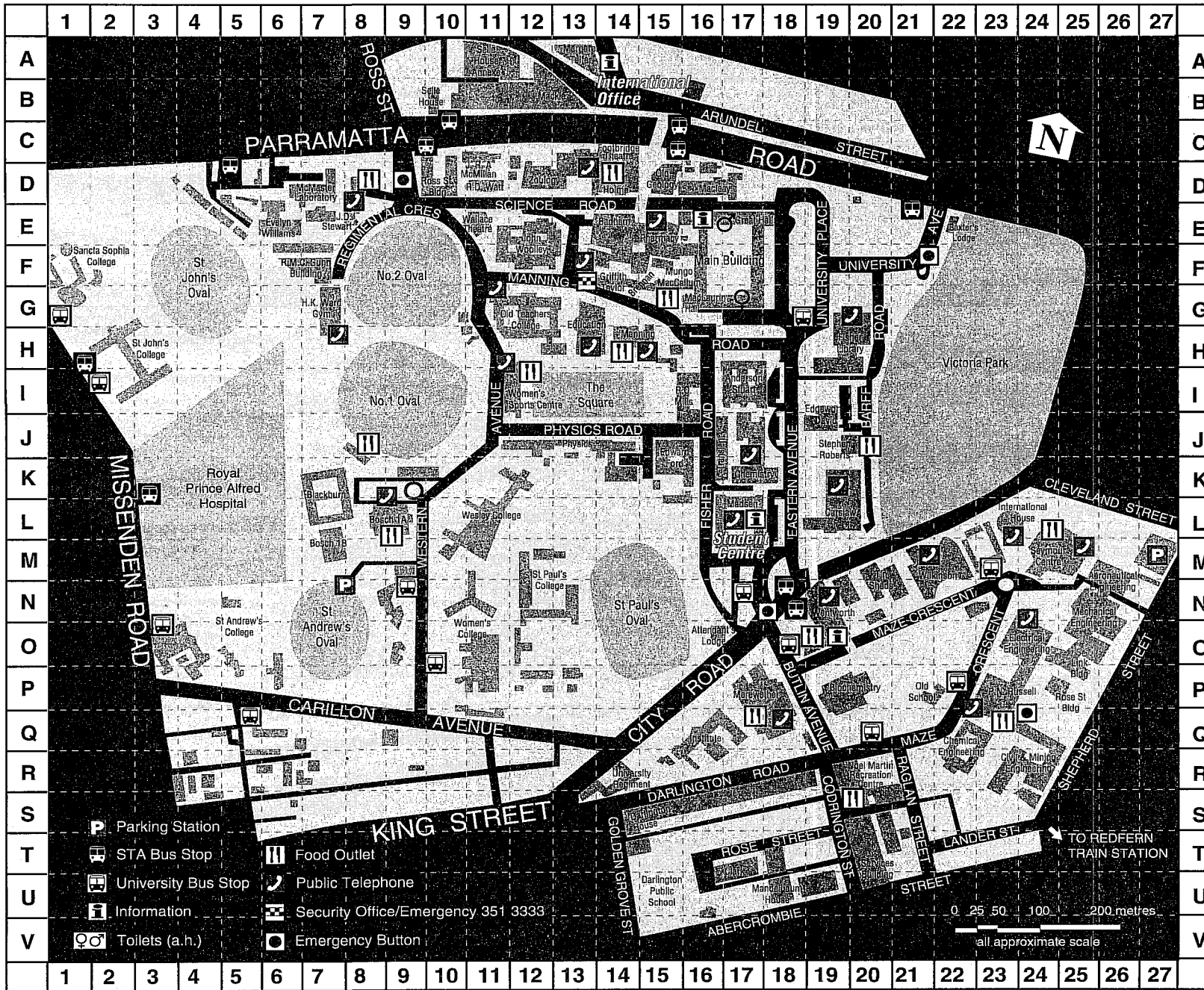
The Foundation has played a major role in securing \$3 million from the Commonwealth Government for the University to purchase the McMaster Laboratory from the CSIRO. After refurbishment this will be occupied mainly by the Department of Veterinary Pathology.

Additional funding from a major bequest, the corporate sector, veterinary graduates and students and the Postgraduate Foundation, is directed towards the construction of a new 250 seat conference centre on the Faculty precinct.

The affairs of the Foundation are being conducted by a council chaired by the Right Honourable J.D. Anthony, CH.

# Departments, schools and buildings-main campus

Academic & Executive Services	16E	Computer Science, Basser Dept	17L	Language Centre	14F	Russell, Peter Nicol, Bldg	23P
Accounting	17P	Continuing Education, Centre for	13B	Learning Assistance Centre	13G	St Andrew's College 2	50
Administrative Policy & Strategic Planning Division	16E	Coppleson Postgraduate Medical Institute	9K	Linguistics	16J	St John's College 3	3H
Administrative Support Services Division	16E	Counselling Service	13G	Link Bldg	250	St Paul's College 4	12N
Aeronautical Engineering	26M	Crop Sciences	13F	Lost Property	14F	Sancta Sophia College 5	1F
Agricultural Chemistry & Soil Science	10D	Darlington House H66	14S	Mackie Bldg	13B	Scholarships	16F
Agricultural Economics	11D	Development Office	160	MacLaurin Hall	16G	Schools Liaison	11E
Agriculture Faculty Office	11C	Disability & Welfare Services	13G	Macleay Bldg & Museum	16D	Science Faculty Office	19L
Alma Street Glasshouse	23N	Econometrics	17P	Madsen Bldg	17L	Security & Bldg Services	14F
Anaesthesia	7K	Economic History	17P	Mail Room (Internal)	20T	Selle House	10B
Anderson Stuart Bldg	17I	Economics, Dept & Faculty Office	17P	Main Bldg	17F	Semitic Studies	17F
Anatomy & Histology	17I	Edgeworth David Bldg	19J	Mandelbaum House	18U	Senate Room	16G
Animal Science	7F	Education Bldg & Faculty Office	13G	Manning House	14H	Services Bldg	20T
Anthropology	16F	Educational Development & Evaluation	15K	Margaret Telfer Bldg	13A	Seymour Theatre Centre	24M
Archaeology, Classics & Ancient History	16F	Educational Psych., Measurement & Technology	13G	Marketing, Dept of	16Q	Shepherd St Parking Station	27M
Architectural & Design Science	22M	Edward Ford Bldg	15K	Marketing & Publications	11E	Sir Hermann Black Gallery	19N
Architecture, Dept & Faculty Office	22M	Electrical Engineering	240	Mathematics & Statistics	19L	Social & Policy Studies in Education	13G
Archives	19H	Employment Service, Casual	14C	McMaster Laboratory CSIRO	7D	Social Work & Social Policy	15I
Art Workshop	20M	Engineering Faculty Office	250	McMillan, J.R.A., Bldg	11C	Solicitor, University	16E
Arts Faculty Office	16F	English	12E	Mechanical & Aeronautical Engineering Bdg	25N	<i>Sports:</i>	
Asset Management	13A	Equal Employment Opportunity Unit	16S	Mechanical Engineering	25N	Noel Martin Recreation Centre	20R
Asian Studies	14F	Evelyn Williams Bldg	6E	Media Office	16E	Sports Union	7G
Attendant's Lodge	160	Experimental Medicine	7K	Medicine	7K	Swimming Pool	20R
Badham Bldg & Library	14E	External Relations Division	16E	Medicine, Dept of	7K	Tennis courts	20D
Banks (see Financial institutions)		Facilities Planning, Office of	20T	Medicine Faculty Office	15K	Ward, H.K., Gymnasium	7G
Baxter's Lodge	22E	<i>Financial institutions:</i>		Merewether Bldg	17P	Women's Sports Association,	12I
Behavioural Sciences in Medicine	7K	Commonwealth	14C	Microbiology	20P	Stephen Roberts Theatre	20J
Biochemistry	20P	Credit Union	14D	Mills, R.C., Bldg	15I	Stewart, J.D., Bldg	8E
Biological Sciences	16D	National Australia	15E	Mungo MacCallum Bldg	15G	Stores	20T
Blackburn Bldg	7K	National Australia	19N	Music	24M	Student Centre*	17L
<i>Bookshops:</i>		Financial Services Division	16E	Nicholson Museum	16G	Student Services*	13G
Medical	7K	Finance, Dept of	16Q	Obstetrics & Gynaecology	9K	SRC	19N
SRC Secondhand	19N	Financial Management & Reporting	13A	Occupational Health	15K	SUPRA	4R
University Co-operative	16J	Financial Services Division	16E	Old Geology Bldg	15D	Surgery	7K
Bosch 1A (lecture theatres)	8L	Fine Arts	15I	Old School Bldg	21P	SydU-tech	19U
Bosch 1B Bldg	7M	Fisher Library	19G	Old Teachers' College Bldg	12G	Systems Development	13A
Botany	16D	Footbridge Theatre	14C	Operations Accounting	13A	Teaching & Curriculum Studies	13G
Brennan, C, Bldg	15F	French Studies	15F	Pathology	7K	Tin Sheds Gallery	20M
Business Liaison Office	13D	Garage, University	21T	Performance Studies (entrance Manning Rd)	12F	Trades & Grounds Services	20T
Business Services	19U	Geography	16Q	Personnel Services	13A	Traffic Office	14F
Campus Services	20T	Geology & Geophysics	19J	Pharmacology	7M	Transient Bldg	16J
Careers Centre	13B	Germanic Studies	15F	Pharmacy	15E	Union, University of Sydney	19N
Carlaw Bldg	19L	Government & Public Administration	17P	Philosophy	17G	Unistaff	19U
Cashiers	13A	Great Hall	18E	Photowise Imaging	20T	University Collection	19H
Celtic Studies	12E	Greek, Modern	14F	Physics	13J	University of Sydney Club	15G
Central Services	22E	Griffith Taylor Bldg	14F	Physiology	17I	Urban & Regional Planning	22M
Centre for English Teaching	17L	Gunn, R.M.C., Bldg	7F	Planning Support Office	16E	Veterinary Anatomy	8E
Centre for Teaching & Learning	19L	Health Service		Post Office	15E	Veterinary Clinic	6E
Chancellor's Committee Shop	17F	Holme Bldg	14C	Printing Services, University	20T	Veterinary Clinical Sciences	6E
Chaplains' Centre	10G	Wentworth Bldg	19N	Properties & Investments	13A	Veterinary Pathology	7E
Chemical Engineering	22Q	History	15G	Psychological Medicine	4K	Veterinary Science Faculty Office	8D
Chemistry	17K	History & Philosophy of Science	19L	Psychology	14F	Vice-Chancellor's Office	16E
<i>Child Care:</i>		Holme Bldg	14C	Purchasing	20T	Wallace Theatre	11E
Boundary Lane	16U	Industrial Relations, Dept of	16Q	Publications Unit	11E	War Memorial Gallery	17E
Carillon Avenue	9Q	Infectious Diseases	7K	Public Health & Community Medicine	15K	Watt, R.D., Bldg	11D
Laurel Tree House (Glebe)	16B	Information Technology Services	19U	Queen Elizabeth II Research Institute	17F	Wentworth Bldg	19N
Union (Darlington)	21S	Institute Bldg	16Q	Regiment, University	9K	Wesley College 6	11L
Civil & Mining Engineering	24R	International Office & International Student Services	13A	Religion, School of Studies in	14R	Western Avenue Underground Parking Station	8N
Clark Bldg	17T	International House	23L	Research & Scholarships	12E	Wilkinson Bldg	22M
Clock Tower	17F	Italian	15I	Revenue Services	16E	Women's College 7	110
Community & Alumni Relations	19H	Knri Centre	19ft	Risk Management	13A	Women's Studies	15S
				Rose Street Bldg	24P	Woolley Bldg, John	12E
				Q n » Ctroaf Dlrn	■inn	Yeoman Bedell's Office	17E
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- **Student Centre (17L):**
  - academic transcripts
  - admissions
  - enrolments
  - examinations
  - graduations
  - handbook sales
  - HECS enquiries
  - travel concessions

- **Student Services (13G):**
  - accommodation
  - counselling
  - financial assistance
  - special services (disabilities, etc.)

# Notes

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