THE UNIVERSITY OF MELBOURNE

FACULTY OF VETERINARY SCIENCE

HANDBOOK, 1976

PUBLISHED BY THE UNIVERSITY
This handbook should be read in conjunction with the *Students' Information Booklet, 1976*, issued free to all students on enrolment or re-enrolment.

In exceptional circumstances the Council is empowered to suspend subjects and to vary the syllabus of a subject. Details of any such alteration will be available from the board of studies office and will be announced on departmental notice-boards.
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FACULTY OF VETERINARY SCIENCE ADMINISTRATION, 1976
as at September, 1975

Dean, PROFESSOR K. V. F. JUBB
Secretary, I. L. MILNE.
Assistant Secretary, ELIZABETH R. PEARSON.
Warden of Kendall Hall, A. H. MEEK.
FACULTY OF VETERINARY SCIENCE
DEAN: PROFESSOR JUBB
THE VICE-CHANCELLOR

Council Member:
MR. D. S. WISHART

The Professors, Associate Professors, Readers and Senior Lecturers in the School of Veterinary Science, and Heads of the Departments of Chemistry, Physics, Botany and Zoology:

MR. J. H. ARUNDEL
PROFESSOR BLOOD
DR. A. H. BROOK
DR. D. M. CALDER
DR. G. D. CAMPBELL
MR. B. A. CHRISTIE
DR. D. B. GALLOWAY
DR. C. G. GAY
DR. K. L. HUGHES
DR. A. C. JABARA
PROFESSOR JUBB
MR. T. A. MASON
DR. J. D. O’SHEA

DR. W. P. C. RICHARDS
DR. M. D. RICKARD
DR. V. SLOSS
PROFESSOR SPICER
PROFESSOR STEEL
PROFESSOR STRANKS
MR. G. A. STEWART
DR. M. J. STUDDERT
DR. D. A. TITCHEN
DR. J. W. WATSON
DR. R. J. H. WELLS
DR. J. S. WILKINSON

Members of University Staff nominated annually by Faculty (8):

DR. R. G. BEILHARZ
PROFESSOR GRAY
PROFESSOR RAY
PROFESSOR SIEMON

PROFESSOR STOREY
PROFESSOR TRIBE
PROFESSOR TULLOH
DR. J. H. WILSON

Representatives of Extra-mural Livestock Industry and Veterinary Professional Interests nominated annually by Faculty (5):

MR. A. R. BEGGS
MR. L. J. FULTON

MR. I. W. MONTGOMERY
MR. W. J. R. WILSON

Dean of the Faculty of Agriculture and Forestry
PROFESSOR STUBBS

Nominated annually by the Minister of Agriculture (3):

MR. D. M. FLYNN
MR. D. E. HORE

MR. B. H. RUSHFORD

Appointed Triennially by Council on Nomination of Faculty (5):

DR. E. FRENCH
MR. J. R. GANNON
MR. P. F. LEWIS

MR. W. A. SNOWDON
MR. A. K. SUTHERLAND

Representative of the Graduate Committee:

VACANT

Other members appointed by Council:

MR. K. E. HARRIGAN
DR. CHEREE SEONG LEE
DR. J. G. McLEAN
MR. R. S. MORSIS
MR. R. M. BAKER
MR. V. C. SPEIRS
DR. V. P. STUDDERT
MR. N. D. SULLIVAN
MR. A. K. W. WOOD
MR. P. J. WRIGHT
MR. W. T. REYNOLDS

Student Members:

MR. R. T. ROE (Postgraduate)  VACANT
MR. J. T. FLANAGAN (Undergraduate)
TEACHING AND RESEARCH STAFF

School of Veterinary Science

Department of Veterinary Clinical Sciences

Medicine

Professor of Veterinary Medicine and Chairman of Department
DOUGLAS CHARLES BLOOD, BVSc Syd. MVSc

Senior Lecturer in Veterinary Medicine
CLIVE COLLINS GAY, MVSc DVM Tor.

Temporary Lecturer in Veterinary Medicine
MARY LOUISE BATII, BVSc

Lecturer in Veterinary Preventive Medicine
ROGER STEWART MORRIS, BVSc Syd. MVSc

Senior Demonstrator
BARBARA VANSELOW, BVSc

Research Fellow
ROBERT MAXWELL CANNON, MSc

Surgery

Senior Lecturer in Veterinary Surgery
THOMAS ALFRED MASON, BVSc Brst. MVSc MRCVS
BRUCE ANDREW CHRISTIE, BVSc Syd. MVSc

Lecturers in Veterinary Surgery
VICTOR CECIL SPEIRS, BVSc
WILLIAM THOMAS REYNOLDS, BVSc

Lecturer in Veterinary Radiology
ANDREW KENNETH WARNER WOOD, MVSc Syd. DipVetRad Syd.

Animal Reproduction

Senior Lecturer in Animal Reproduction
DAVID BRUCE GALLOWAY, BVSc Syd. FRCVS VMD Stockholm MVSc

Senior Lecturer in Veterinary Obstetrics
VALENTINS SLOSS, DrVetMed Giessen MVSc

Lecturer in Animal Reproduction
PATRICK JOHN WRIGHT, BVSc Syd. MVSc

Part-time Officers:

Lecturer in Veterinary Medicine
VIRGINIA PERRYMAN STUDDERT, DVM Cal.

Hospital Internes

Medicine

SUSAN MARGARET CREWThER, BVSc
BRUCE JAMES ANDISON, BVSc
Surgery
ALISTAIR ANGUS McLEAN, BVSc Massey
GEORGE BARRY SMYTH, BVSc

Animal Reproduction
RAYMOND JOSEPH HORSEY, BVSc

Department of Veterinary Para-clinical Sciences
Professor of Veterinary Pathology
KENNETH VINCENT FINLAYSON JUBB, BVSc Syd. MSc PhD Corn. MVSc FACVSc

Reader in Veterinary Parasitology and Chairman of Department
JOHN HENRY ARUNDEL, BVSc Syd. MVSc

Senior Lecturers in Veterinary Pathology
WILLIAM PETER CLIFFORD RICHARDS, BSc BVSc Syd. MVSc Tor. PhD Calif.
RONALD JAMES HERBERT WELLS, HDA BVSc Syd. PhD Cantab. MVSc
JOHN SYDNEY WILKINSON, BSc(VetSc) PhD Lond. MRCVS MVSc

Lecturers in Veterinary Pathology
KARL EDWARD HARRIGAN, BVSc
NEIL DERMOT SULLIVAN, MVSc Q'ld.

Senior Lecturer in Pathology
ANNE GILMOUR JABARA, MSc PhD

Reader in Veterinary Microbiology
MICHAEL JUSTIN STUDDERT, BVSc Syd. MVSc Tor. PhD Calif.

Senior Lecturers in Veterinary Microbiology
KEITH LESLIE HUGHES, MVSc Q'ld. DipBact Lond. PhD Syd.

Lecturer in Veterinary Microbiology
VACANT

Senior Lecturer in Veterinary Parasitology
MICHAEL DESMOND RICKARD, BVSc PhD Q'ld.

Research Fellow in Wildlife
IAN BEVERIDGE, BVSc

Demonstrators
VALERIE SURTEES, MB BS
HELEN WYER, BVSc

Part-time Teaching Staff
L. BRAYBROOK
D. Moo
N. B. WALDEN, BVSc
H. WIRTH, BVSc

Department of Veterinary Pre-clinical Sciences
Professor of Veterinary Physiology
JAMES DAVIDSON STEEL, DVSc Syd. MVSc

Reader in Veterinary Physiology
DONALD ALEXANDER TITCHEN, BVSc Syd. MA PhD Cantab. MVSc
Senior Lecturer in Veterinary Physiology
ANDREW HENRY BROOK, BVSc Syd. DVSc

Senior Lecturer in Veterinary Pharmacology
GORDON ANTHONY STEWART, BVSc Syd. MVSc Tor. & Melb.

Lecturer in Veterinary Biochemistry
JOHN GRIFFITHS McLEAN, BVSc Syd. PhD HDA

Reader in Veterinary Anatomy
JAMES WILLIAM WATSON, BVSc PhD Q’ld. MVSc

Lecturers in Veterinary Anatomy
CHEE SEONG LEE, BVSc Taiwan MVSc Q’ld. PhD Syd.
ROBERT MARSHALL BAKER, BVSc Syd. MSc

Reader in Veterinary Histology and Chairman of Department
JEREMY DAVID O’SHEA, BVetMed PhD Lond. MVSc

Senior Tutors
MICHAEL ROHAN NICHOLLS, BVSc
MARGARET AGNES WYLIE, BSc Syd.

Part-time Officers
JUDITH HELEN BURRELL, BVSc Syd.
IVAN CAPLE, BVSc PhD N.S.W.
RONALD SAMUEL CAIRSON, BSc
IAN ALISTAIR CUMMING, MAgSc Massey PhD
JAMES RICHARD CANNON, BVSc Q’ld.
SUSAN ANN GIBBS, MSc
STEPHANIE GLADYS HART, BSc W. Aust.
ROGER DONALD HOOLEY, BAgSc
LEONARD CHARLES LLOYD, BVSc PhD
SANDFORD LOYD SKINNER, BS MD Adel.
LYNTON STAPLES, BAgSc
DAVID ALAN TAYLOR, BSc
KATHLEEN HELEN WHITE, BSc
KEVIN WILLIAMS, BVSc Q’ld.

Staff of the School of Agriculture & Forestry Lecturing in Animal Production

Professor of Animal Nutrition
DEREK EDWARD TRIBE, BSc (Agric) R’dg. PhD Aberd. DAgSc

Professor of Animal Production
NORMAN McCALL TULLOH, MAgSc PhD

Senior Lecturer in Animal Breeding
ROLF GEORGE BEILHARZ, MSc Agr Syd. PhD Iowa

Senior Lecturer in Animal Production
ANTHONY COLTHUP DUNKIN, BSc (Agric.) R’dg. MSc (Agric.) Lond.

Senior Lecturer in Animal Nutrition
GEOFFREY ROGER PEARCE, BSc (Agric.) PhD W. Aust.

Reader in Agriculture
JOHN HEATHERBELL WILSON, PhD Lond. BAgSc

Vet. Sci.—B
CHAPTER 1

GENERAL INFORMATION

Students’ Information Booklet

Students should consult this booklet for additional information of a general importance to all students.

Degrees

(a) Bachelor of Veterinary Science

A five-year course, the fourth and fifth years being spent at the Veterinary Clinical Centre, Werribee. (See p. 17.)

(b) Bachelor of Animal Science

Candidates for this degree must have completed the third or a later year of the course for the degree of bachelor of Veterinary Science and then undertake a course of advanced studies for at least one year. (See p. 18.)

(c) Master of Veterinary Science

Candidates for this degree must pursue a course of advanced studies and training in research, under such supervision as the Faculty may prescribe, for not less than one year, at the end of which he must submit a thesis and a review of the literature. He may also be required to pass an additional examination. (See p. 19.)

(d) Master of Veterinary Studies

Candidates for this degree must pursue a course of advanced studies for at least one academic year, attend lectures or classes, undertake practical work as may be prescribed by the Faculty and pass the prescribed examinations. (See p. 20.)

(e) Doctor of Philosophy

This is a degree for full-time research workers. A candidate must be a graduate of this or some other university recognized for the purpose, must be of such standing as may be required by the Professorial Board for graduates in his faculty, and must be accepted as such by the Professorial Board on the recommendation of the head of the department concerned. He must pursue for at least two years a course of advanced study and research under a supervisor or supervisors appointed by the Board, and on its completion must present a satisfactory thesis embodying the results of his research. The only part-time candidates who are accepted by the Professorial Board are permanent members of staff. (See regulation R.3.60 in University Calendar, 1974.)

(f) Doctor of Veterinary Science

Obtainable only by thesis on a subject approved by the Faculty of Veterinary Science. Candidates must be bachelors of Veterinary Science of at least three years' standing. (See p. 20.)

University General Principles of Selection

See Students' Information Booklet.

Special Principles of Selection—Veterinary Science

Candidates intending to pursue studies in Veterinary Science must, in addition to satisfying requirements for matriculation, have completed and passed in Chemistry and either Physics or a branch of Mathematics at the Higher School Certificate
Examination. Chemistry, and the best mark out of Physics and Mathematics are included in the applicant's “best four subjects” in assessing his quota score for selection purposes.

In selection of students into the first year of the BVSc course, the Faculty of Veterinary Science will consider failed first year students in relation to new applicants, while retaining at its discretion an ability to allow students in special circumstances to repeat the year without reference to other selection considerations. Those failed candidates who are not reselected should be offered the option available under R.2.2. Sections 6 and 7 before being recommended for suspension.

Policies Governing Admission 1976

Quotas and Selection

FIRST YEAR

In view of the shortage of laboratory accommodation and the increased enrolments, the University Council has placed a restriction on the number of students permitted to enrol in the First Year of the Veterinary Science Course. This number is 50 in 1976.

SECOND YEAR

Quota and Admissions

The accommodation and teaching facilities available for Second Year Veterinary Science will be adequate for only 48 students. However, the Faculty is of the opinion that students in the following three categories have a legal right to be enrolled for the course, and the Faculty is therefore prepared to accept all students who qualify in these categories:

1. All who pass the First Year examination.
2. Students permitted to repeat Second Year.
3. Second Year students permitted to resume the course after leave of absence.

If the total number in these categories falls short of 48, the Faculty will admit other qualified applicants up to this number. Therefore, admissions to Second Year shall include the above three categories, together with technically qualified transferees (from other courses in this University) and technically qualified _ad eundem statum_ candidates (from other approved universities) who shall be admitted (after selection on academic merit, if selection proves necessary, at the discretion of the faculty) if their enrolment does not cause the total enrolments for the year to exceed 48.

THIRD YEAR

_Ad eundem statum_ admissions and other transfers shall not cause the total permitted to enrol in the year to exceed 48.

FOURTH AND FIFTH YEARS

_Ad eundem statum_ admissions and other transfers shall not cause the total permitted to enrol in either year to exceed 42.

Applications

FIRST YEAR

All students applying for admission to the First Year of the Veterinary Science course must follow the procedure outlined below:

1. Obtain from the Victorian Universities Admissions Committee, 11 Queens Road, Melbourne, 3004, an application form and a handbook of instructions.
2. Complete and lodge the form according to the instructions. The identification code for this course is UVS.
3. Await the result of the application and if an offer is made attend promptly at the University.

SECOND AND LATER YEARS

All students applying for admission to Second or later years of the Veterinary course must apply directly to the Faculty Secretary.
Photographic Record of Students

Students admitted to the First Year of the Veterinary Course may be required to be photographed for record purposes.

Directions for having photographs taken at the School of Veterinary Science (free of charge) will be given early in the First Term.

Special Instructions for Veterinary Science Students

Your attention is drawn to the following advice concerning Examinations and the conditions regarding consideration in special circumstances.

Students should also note Paragraph 6 relating to the conditions under which the Faculty is required to report students who are making unsatisfactory progress in this course.

1. Special Consideration:

If your studies during the year have been affected by illness or other serious causes, you may apply to the Registrar for special consideration, before the commencement of the examination period. Conditions of employment or overtime are not grounds for special consideration.

If you cannot sit for an examination because of illness or other serious cause, you should notify the Registrar in writing enclosing a medical certificate or other evidence.

If you become ill during an examination, see the Chief Supervisor and notify the Registrar in writing immediately.

Absence from examination through misreading the time-table does not entitle a student to any further examination.

2. Extra Tests:

Further tests may be given in all subjects, either orally or by short written examinations in the Departments. You will be advised by letter at short notice regarding attendance for these tests. Notices will be sent to addresses given on Examination Entry forms. Candidates should ensure that their current addresses are recorded at Students' Records Office. Those who leave Melbourne before the publication of results do so at their own risk.

3. Special Examinations:

Special Examinations may be granted in exceptional cases of students who have been gravely hampered by illness or other serious cause, either during the year or during the examination. The times of these Special Examinations will depend on the individual case. (If a candidate has only been temporarily ill during the examination, then his Special Examination, if one is warranted, may be held a week or so later. If, on the other hand, a student has sustained a chronic or protracted illness during the year, he may be permitted to sit for a Special Examination in February).

4. Marks and Reports:

Candidates are forbidden to communicate with examiners on the subject of the examination before the publication of results.

In very special circumstances, students requiring information may apply to the Secretary, Faculty of Veterinary Science.

After the publication of results, students may apply for interview with the chairman of departments to discuss their failure, but marks and reports cannot be supplied.

5. Faculty Pass:

A faculty pass for a year may be granted if a student does not pass all subjects of a year but performs sufficiently well in the passed subjects. A faculty pass can only be obtained at the first attempt (i.e. not a supplementary examination or repeat year) at the examinations for the year.

6. Unsatisfactory Progress:

Under University regulations, the Faculty may recommend to the Professorial Board that students be suspended from the course or limited as regards subjects, in accordance with Regulation 2.5, if the students have shown unsatisfactory progress in their course.
7. **Attendances at Lectures, Demonstrations and Practical Work:**

Attendances at lectures, demonstrations, practical work and clinical instruction are compulsory and, in addition, competent performance in carrying out the duties and work prescribed in all subjects is required. Failure to comply with these requirements may lead to disqualification for presenting at examinations. Students so disqualified will usually be notified in writing by the Faculty of Veterinary Science, but the faculty is not bound to give such notification.

8. **Leave of Absence:**

In special cases, for medical reasons or financial hardship, Faculty may grant one year's leave of absence from the course. A student failing to resume at the end of one year may be recommended for suspension and re-admission would be dependent upon selection in the prevailing quota.

9. **Change of Address or Name:**

Students must advise the Students Records Office and the Faculty Secretary immediately of any change of address or name, e.g. in the case of marriage.

10. **Interruption to Studies:**

Students prevented by illness or other serious cause from satisfying attendance requirements for one week or more should report their absences in writing to the Faculty Secretary, who will advise the lecturers in the relevant subjects, so that dispensation may be granted by the faculty, if necessary.

11. **Withdrawal from Course:**

Students who wish to discontinue their course must advise the Faculty Secretary in writing. Having discontinued a course, a person who wishes to re-enrol in that course must apply for re-admission and is subject to re-selection.

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**University Hall of Residence**

**W. T. Kendall Hall:**

Warden: A. H. Meek  
Address: Veterinary Clinical Centre, Princes Highway, Werribee, Vic. 3030.

The Hall provides residence for Fourth and Fifth Year Veterinary Science students. Postgraduate students are eligible for residence subject to availability of accommodation.

W. T. Kendall Hall is also available for residential schools, short courses and conferences during academic vacations.

See also the Students' Information Booklet.
CHAPTER 2

FINANCIAL ASSISTANCE

Undergraduate

In addition to that in the Students' Information Booklet, the financial assistance and awards mentioned below are available to Veterinary Science students. Students should also consult the Calendar.

Department of Agriculture

Cadetships open to students under 26, qualified to matriculate and to be admitted to the Veterinary Science Course.

All fees and living allowance paid.

Cadet bonded to the Department for 5 years after completing the Course, or for a period equivalent to the time taken to complete the Course if awarded a Cadetship during the Course.

Enquiries to:

Director,
Department of Agriculture,
Treasury Place,
Melbourne, Vic. 3002.

Summary of Awards

The following table gives a summary of awards other than those described in the Students' Information Booklet which are available to Veterinary Science students at entrance, undergraduate, final examination and postgraduate levels. More precise information concerning awards may be obtained from Chapter 3 of the Regulations or Appendix 2 in the 1975 Calendar or from the person indicated in the table.

N.B.—Values of awards as shown below are approximate only.

<table>
<thead>
<tr>
<th>Field</th>
<th>Title and Approximate Value</th>
<th>Calendar Reference or Information Source</th>
</tr>
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<tbody>
<tr>
<td>Animal Reproduction</td>
<td>National Bank Prize</td>
<td>Secretary, Faculty of Veterinary Science</td>
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<tr>
<td>Biology</td>
<td>J. F. W. Payne Exhibition</td>
<td>R.7.3.6 (h)</td>
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<tr>
<td></td>
<td>$40</td>
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</tr>
<tr>
<td>Clinical Conference</td>
<td>Melbourne Metropolitan Vet-</td>
<td>Secretary, Faculty of Veterinary Science</td>
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<tr>
<td></td>
<td>erinary Practitioners' Prize $50</td>
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</tr>
<tr>
<td>Veterinary Anatomy</td>
<td>Ramsay Prize</td>
<td>Secretary, Faculty of Veterinary Science</td>
</tr>
<tr>
<td></td>
<td>$50</td>
<td></td>
</tr>
<tr>
<td>Veterinary Clinical</td>
<td>W. M. Vansell Prize</td>
<td>Secretary, Faculty of Veterinary Science</td>
</tr>
<tr>
<td>Medicine</td>
<td>$100</td>
<td></td>
</tr>
<tr>
<td>Veterinary Microbiology</td>
<td>C.S.L. Prize $50</td>
<td>Secretary, Faculty of Veterinary Science</td>
</tr>
<tr>
<td>Veterinary Pathology</td>
<td>Australian Veterinary Assoc-</td>
<td>Secretary, Faculty of Veterinary Science</td>
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<td></td>
<td>iation (Federal Council)</td>
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<td></td>
<td>Prize</td>
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<td>Field</td>
<td>Title and Approximate Value</td>
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</tr>
<tr>
<td>Veterinary Pathology</td>
<td>H. E. Alibistion Prize $200</td>
<td>Secretary, Faculty of Veterinary Science</td>
</tr>
<tr>
<td>Veterinary Preventive Medicine</td>
<td>Stanbroke Pastoral Company Prize $50</td>
<td>Secretary, Faculty of Veterinary Science</td>
</tr>
<tr>
<td>Veterinary Science</td>
<td>Australian Veterinary Association (Victorian Division) Prize</td>
<td>Secretary, Faculty of Veterinary Science</td>
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<tr>
<td>Veterinary Science</td>
<td>Dwight's Prize $50</td>
<td>R.6.5.4</td>
</tr>
<tr>
<td>Veterinary Science</td>
<td>The F. Gordon Elford Fund</td>
<td>R.7.88</td>
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<tr>
<td>Veterinary Science</td>
<td>Harry Worthington Prize $160</td>
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<td>Veterinary Science</td>
<td>Payne Exhibition $240</td>
<td>R.6.30</td>
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<td>Veterinary Science</td>
<td>Mary W. Wilson Prize $210</td>
<td>R.6.142</td>
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<tr>
<td>Veterinary Surgery</td>
<td>Memorial Prize in Veterinary Surgery $36</td>
<td>R.6.72(60)</td>
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<tr>
<td>Veterinary Surgery</td>
<td>May &amp; Baker Prize $180</td>
<td>Secretary, Faculty of Veterinary Science</td>
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**GRADUATE**

<table>
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<th>Field</th>
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<tr>
<td>Veterinary Science</td>
<td>Commonwealth Bureau of Animal Health Prize</td>
<td>Secretary, Faculty of Veterinary Science</td>
</tr>
<tr>
<td>Veterinary Science</td>
<td>Sir John and Lady Higgins Research Scholarship $3,000</td>
<td>R.6.60</td>
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<tr>
<td>Veterinary Science</td>
<td>J. M. Higgins Research Fund $1,260</td>
<td>R.6.44</td>
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<td>Veterinary Science</td>
<td>John Neville Research Scholarship $160</td>
<td>R.6.36</td>
</tr>
<tr>
<td>Veterinary Science</td>
<td>H. W. C. Simpson Research Scholarship $1,400</td>
<td>R.6.62</td>
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<tr>
<td>Veterinary Science</td>
<td>A. M. White Scholarship Not more than $200</td>
<td>See “Announcements”</td>
</tr>
<tr>
<td>Veterinary Science</td>
<td>Dairy Farmers of Victoria Postgraduate Scholarship $630</td>
<td>R.6.129</td>
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15
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<thead>
<tr>
<th>Field</th>
<th>Award Description</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Veterinary Science</td>
<td>Sunshine Foundation Postgraduate Scholarship $730</td>
<td>R.6.128</td>
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<tr>
<td>Veterinary Science</td>
<td>Victorian Bloodhorse Breeders Association Prize $200</td>
<td>R.6.157</td>
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<tr>
<td>Veterinary Science</td>
<td>V.W. Officer Prize $300</td>
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</tr>
<tr>
<td>Veterinary Science</td>
<td>Pal Scholarship $3,750</td>
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</tr>
<tr>
<td>Veterinary Science</td>
<td>Barrenger Overseas Veterinary Scholarships</td>
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</tr>
</tbody>
</table>

Secretary, Faculty of Veterinary Science
See “Announcements”
Secretary, Faculty of Veterinary Science
See “Announcements”
Secretary, Faculty of Veterinary Science
CHAPTER 3

REGULATIONS—VETERINARY SCIENCE

Regulation 3.31—Degree of Bachelor of Veterinary Science

1. There shall be:
   (a) a degree of bachelor of Veterinary Science; and
   (b) a degree of bachelor of Veterinary Science with honours.

DEGREE OF BACHELOR OF VETERINARY SCIENCE

2. A candidate for the degree of bachelor of Veterinary Science shall, after matriculation, pursue his studies for five Years, pass the prescribed examinations and comply with the conditions of this regulation.

3. No candidate shall be admitted to the course for the degree of bachelor of Veterinary Science unless, subject to dispensation by the faculty of Veterinary Science in special cases, he has obtained Grade D or higher in Chemistry and in either Physics or a branch of Mathematics at the Higher School Certificate Examination.

4. During each Year of the course and between Years of the course, a candidate shall attend such lectures, excursions and demonstrations and perform such laboratory and practical work as the faculty of Veterinary Science (hereinafter called "the faculty") shall determine unless he satisfies the faculty that he has had appropriate training elsewhere.

4A. The subjects of the course for the degree and the conditions on which such subjects may be taken shall be as prescribed from time to time by the Professorial Board on the recommendation of the faculty and published with the details of subjects.


11. (1) To pass a Year of the course a candidate shall comply with one of the following conditions:
   (i) he shall pass at an annual examination in or obtain credit for each subject of that Year; or
   (ii) he shall be passed by the faculty in the Year of the course as a whole. In awarding such pass the faculty shall take into account his performance in all subjects in accordance with the principles determined by the faculty from time to time and approved by the Professorial Board. A candidate passed by the faculty in the Year as a whole who has not passed at the annual examination in or obtained credit for any particular subject shall not be recorded as having passed in that subject.

   (2) Except where special permission is given by the faculty a student shall pass one Year of the course in accordance with the preceding sub-section before being allowed to proceed to any subject of the succeeding Year of the course. In no case shall he proceed to any subject of the Third Year unless he has passed the First Year, nor to any subject of the Fourth Year unless he has passed the Second Year.

   (3) A candidate who before the beginning of any academic year has not passed a Year of the course in accordance with sub-section (1) hereof must take or repeat the whole of that Year of the course which he has not completed, unless special permission to do otherwise is granted by the faculty.

12. (1) A candidate shall gain practical experience in—
   (a) the application of veterinary science, for at least three months which need not be continuous under such supervision and such conditions as may be approved by the faculty; and
   (b) animal management for at least three months which need not be continuous in accordance with conditions approved by the faculty.
(2) On the recommendation of the faculty, the Council may appoint persons who are qualified to engage in the practice of veterinary science to act as supervisors for the purposes of sub-section (1) (a) each of whom shall report to the faculty as required by it concerning the performance of each candidate under his supervision.

(3) Each candidate shall submit to the faculty a certificate satisfactory to the faculty recording his work in animal management in accordance with the approved conditions.

13. Where the faculty is satisfied that the candidate has had adequate practical experience in the application of Veterinary Science, including Animal Management, the faculty may exempt such candidate from all or part of the requirements of section 12 hereof.

14. In each Year the examinations may be for both pass and honours and separate honour class lists shall be published.

15. A candidate who has fulfilled the requirements of this regulation may be admitted to the degree of bachelor of Veterinary Science.

DEGREE OF BACHELOR OF VETERINARY SCIENCE WITH HONOURS

16. A candidate for the degree of bachelor of Veterinary Science with honours shall complete the course as for the degree of bachelor of Veterinary Science in accordance with the preceding provisions.

17. The faculty shall after considering the whole of a candidate's course publish a final honour class list which shall contain in order of merit the names of candidates who have obtained first class, second class or third class honours. Candidates who have been so classed may be admitted to the degree of bachelor of Veterinary Science with honours.

Regulation 3.79—Degree of Bachelor of Animal Science

1. Candidates for the degree of bachelor of Animal Science shall after completing the third or a later year of the course for the degree of bachelor of Veterinary Science pursue for not less than one year a course of advanced studies in any one of the following subjects: Anatomy, Histology, Embryology, Pharmacology, Physiology, Biochemistry, Pathology, Microbiology, Parasitology, Animal Genetics, Animal Nutrition, or in such other subject as the faculty of Veterinary Science may approve.

2. Before commencing his course, a candidate shall obtain the approval of the faculty of Veterinary Science and of the head of that department of the University in which he proposes to carry out his course, and the head of that department shall with the approval of the faculty prescribe for him the advanced studies to be pursued by him.

3. No candidate shall be admitted to the course unless—

(a) in the opinion of the faculty of Veterinary Science he has shown special aptitude for his studies in the course for the degree of bachelor of Veterinary Science; and

(b) he has been recommended by the head of the department in which his advanced studies are to be carried out.

4. The head of the department in which the candidate proposes to carry out his course of advanced studies may, with the approval of the faculty of Veterinary Science, require the candidate to attend lectures, carry out practical work, and pass an examination in a subject or subjects, or any parts of a subject or subjects, related to his course.

5. A candidate shall submit for examination a detailed report on the advanced studies carried out by him, and may be required to pass a written examination or a viva voce examination, or both, concerning the subject of such report.

6. A candidate who has submitted a satisfactory report on his advanced studies and fulfilled all other conditions prescribed for him may be admitted to the degree of bachelor of Animal Science which degree shall be for pass and honours.
Regulation 3.32—Degree of Master of Veterinary Science

1. A person may be a candidate for the degree of master of Veterinary Science if:

(a) (i) he is a bachelor of Veterinary Science in the University; or
(ii) he has an equivalent qualification accepted by the Professorial Board on the recommendation of the faculty of Veterinary Science (hereinafter called "the faculty");
(b) he has obtained the approval of the faculty to an outline of his proposed course of advanced studies and research; and
(c) he has given to the faculty satisfactory evidence of sufficient training and ability to pursue the proposed course.

2. A candidate shall pursue a course of advanced studies and training in research under such supervision as the faculty may prescribe for at least one year.

3. A candidate shall during the course devote his whole time to his advanced study and research, save that:

(a) the faculty may allow a candidate, on application, to undertake a limited amount of university teaching or other work which in its judgement will not interfere with the pursuit of the proposed course of advanced study and research;
(b) the faculty may admit as part-time candidates for the degree—
   (i) a member of the staff of the University, or
   (ii) a person engaged in an occupation which in the opinion of the faculty leaves the candidate substantially free to pursue his course in a department of the University;
and the faculty shall prescribe the duration of the course for a part-time candidate having regard to the proportion of time which he is able to devote to the course in the appropriate University department, which is equivalent to the one year ordinarily required.

4. Each candidate shall:

(a) submit for examination, within the period prescribed by the faculty, a thesis based on the work carried out by him during his course of advanced studies and research;
(b) pass the examination in any subject or subjects prescribed by the faculty;
(c) undergo such further test whether by written paper or otherwise as the faculty may determine.

5. A candidate for the degree of master of Veterinary Science may not, except by special permission of the faculty, enter at the examination for any subject other than those prescribed for the completion of the course for that degree.

6. Notwithstanding any other provisions in this regulation a person may with the approval of the faculty be a "non-attending" candidate for the degree of master of Veterinary Science if:

(a) he satisfies the requirements of Section 1(a) hereof;
(b) he has since obtaining such qualification acquired two years of experience in some branch of Veterinary Science approved for this purpose by the faculty or such other period as the faculty may prescribe in a specific case;
(c) he has obtained the approval of the faculty for his field of research.

7. A person who qualifies for candidature under the provisions of Section 6 hereof shall after being admitted to candidature:

(a) (i) submit for examination, within the period prescribed by the faculty, a thesis based on his research work; or
(ii) under such conditions as the faculty shall specify, submit published or unpublished works, reports, or other documents, (hereinafter collectively called "other work") in place either of part or the whole of the thesis referred to in section 7(a)(1) hereof.
(b) undergo such further test whether by written paper or otherwise as the faculty may determine.
8. The theses referred to in sections 4(a) and 7(a)(i) of this regulation shall be prepared and submitted in accordance with Regulation 4.6 and with such additional specifications as the faculty may direct.

9. A candidate when submitting his thesis or other work shall submit a signed statement as to:
   (a) the sources from which he derived his information;
   (b) the extent to which he has availed himself of the work of others; and
   (c) the portions of his thesis or other work which he claims as original.

10. Should the thesis or other work submitted by a candidate have been undertaken in collaboration with others, a candidate will be required to submit a signed statement as to the extent of his own share—
   (i) in planning the work;
   (ii) in carrying out the work; and
   (iii) in writing an account of the work.

11. Candidates who have fulfilled the prescribed conditions, and been passed by the examiners, may be admitted to the degree of master of Veterinary Science.

Regulation 3.78—Degree of Master of Veterinary Studies

1. A person may be a candidate for the degree of master of Veterinary Studies who:
   (a) (i) is a bachelor of Veterinary Science of the University; or
   (ii) has a qualification which is accepted as equivalent by the Professorial Board on the recommendation of the faculty of Veterinary Science (hereinafter called "the faculty"); and
   (b) has given to the faculty satisfactory evidence of sufficient training and ability to pursue the proposed course.

2. A candidate shall:
   (a) pursue a course of advanced studies for at least one academic year, attend lectures and classes, and undertake practical work as may be prescribed by the faculty; and
   (b) pass examinations prescribed by the faculty.

3. The courses of study available, the duration of each course, and the syllabus of each subject of examination, shall be prescribed annually by the Professorial Board on the recommendation of the faculty, and published in the details of subjects.

4. Candidates who satisfy the requirements of this regulation may be admitted to the degree of master of Veterinary Studies.

Regulation 3.33—Degree of Doctor of Veterinary Science

1. Candidates for the degree of doctor of Veterinary Science shall be either bachelors of Veterinary Science of at least three years' standing or admitted on the recommendations of the faculty in accordance with regulation 3.3 to the status of a candidate eligible to proceed to the examination for the degree of doctor of Veterinary Science.

2. The faculty shall not admit any person as a candidate for the degree unless he has in the opinion of the faculty already made substantial published contributions to Veterinary Science.

3. An intending candidate shall submit a record of his published scientific work and the prescribed number of copies of all the work\(^1\) whether published or unpublished, which he wishes to submit for examination. A candidate may not submit for examination work in respect of which he has already qualified for a degree in any university or, without the permission of the faculty, work which he has previously presented for any such degree.

The faculty, if it approves the subject or subjects of the work submitted for examination, shall thereupon nominate examiners.

4. Every candidate in submitting his published work and such unpublished work as he deems appropriate shall state generally in a preface and specifically in notes the sources from which information is derived, the extent to which he has

\(^1\) See Regulation 4.6. Three copies must be submitted.
availed himself of the work of others, and in general terms the portions of his work which he claims as original. When a candidate submits work carried out in collaboration with another person, he shall indicate his own share in the work.

5. Candidates who have given evidence of research and ability satisfactory to the examiners and have fulfilled the other prescribed conditions may be admitted to the degree of doctor of Veterinary Science.
**CHAPTER 4**

**DETAILS OF SUBJECTS**

**SUMMARY LIST OF SUBJECTS**

When enrolling, students must quote the NUMBER as well as the name of the subjects as listed below.

**BVSc (Regulation 3.31, Section 4A)**

<table>
<thead>
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<th>First Year</th>
<th>600-053. Animal Biology (Veterinary Course)</th>
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<td>600-055. Biology (Genetics and Ecology) (Veterinary Course)</td>
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<td>Second Year</td>
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<td>260-203. Veterinary Biochemistry</td>
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<td>Third Year</td>
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<td>250-513. Clinical Sciences 13</td>
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<td>*An elective non-examinable subject.</td>
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**MVS (Regulation 3.78, Section 3)**

| 260-611. MVS Pre-Clinical Sciences |

*This code and name to be used by students undertaking one of the following:*

- Veterinary Anatomy
- Veterinary Histology and Embryology
- Veterinary Biochemistry
- Veterinary Physiology and Pharmacology

| 270-611. MVS Para-Clinical Sciences |
This code and name to be used by students undertaking one of the following:
Veterinary Pathology
Veterinary Microbiology
Veterinary Parasitology
280-611. MVS—Clinical Sciences

This code and name to be used by students undertaking one of the following:
Equine Clinical Studies
Veterinary Epidemiology and Preventive Medicine
MVSc (Regulation 3.32)

260-601. MVSc—Pre-Clinical Sciences
270-601. MVSc—Para-Clinical Sciences
280-601. MVSc—Clinical Sciences

BACHELOR OF VETERINARY SCIENCE

VACATION WORK

Students are required, during vacations, to gain practical experience in the application of Veterinary Science, including animal management, for at least six months, which need not be continuous. The animal management section of this work (3 months) is carried out in connection with the subject of Animal Production, parts 1 and 2 (see details of subjects). All students exempted from part or all practical work may be expected to pass an examination in this work. The veterinary section of the work must be carried out under the supervision of veterinary practitioners appointed for this purpose by the Faculty. The minimum period for the veterinary section of the extra-mural work shall be 12 weeks and not more than 4 weeks of credit may be gained prior to completion or Clinical Sciences 1 in the fourth year. Prior approval by the Dean must be obtained for all extra-mural veterinary work and certification of satisfactory completion of the work must be submitted by the student.

HONOUR WORK

The syllabus and examination for honours will be the same as that for pass, but candidates for honours will be required to attain a higher standard and to show more detailed knowledge.

LECTURES AND PRACTICAL WORK

Details of subjects for the course, including the number of lectures, tutorials, etc., and hours of practical work, are published below.

EXTERNAL STUDIES

No external tuition is provided in any subject.

NOTE

Books marked with an asterisk are essential texts which students should possess.

FIRST YEAR

600-053. ANIMAL BIOLOGY

Dr. John R. McLean (Convenor—Department of Zoology).

48 lectures: 54 hours practical work, half-day and whole-day excursions may be arranged; 1st and 2nd terms.

Pre-requisites: a knowledge of Chemistry and Physics to H.S.C. standard is assumed. A knowledge of H.S.C. Biology would be an advantage.

SYLLABUS

The course will be divided equally between:
Vertebrate Zoology: a brief diagnosis of vertebrates and their classes; a description of anatomy, structure and function of selected organ systems in a non-mammalian
type (an amphibian); the fossil history of vertebrates; an introduction to chick and amphibian embryology. Practical work: thorough dissection and histological examination of an amphibian; superficial dissection of two other vertebrates; some aspect of behaviour or physiology of a live mammal; embryology.

Invertebrate Zoology: lectures and practical work will consider the following groups: Protozoa, Porifera and Coelenterata, Platyhelminthes and Nematodes, Annelida; Arthropoda, Mollusca, Echinodermata and Protochordates. For each Phylum there will be an account of functional anatomy and life cycles for one or more types, followed by a review of the group emphasising features of biological and economic importance.

EQUIPMENT

Students must provide themselves with dissecting instruments, laboratory drawing books (No. 7), a number of microscope slides, cover-slips and a hand lens (x 10). Microscopes are provided in the laboratory in the Redmond Barry Building.

BOOKS

(a) Preliminary reading:
for those without H.S.C. biology: Sections 1, 2, 6, 7, 9, 10 and 11 in Biological Science—The Web of Life. (2nd ed., Australian Academy of Science.)
Prescribed textbooks:
*Barnes, R. D., Invertebrate Zoology. (2nd ed., Saunders, 1968.)

EXAMINATIONS

2-hour theory examinations in the August and November examination periods, and 1-hour practical examinations in the May and November examination periods.

600-054. PLANT BIOLOGY

Dr. G. Weste (Convenor—Botany School).

48 lectures: 54 hours practical work, two whole-day excursions, 1st and 2nd terms.
Pre-requisites: a knowledge of Biology, Chemistry and Physics to H.S.C. standard is an advantage.

SYLLABUS


EQUIPMENT

Students must provide themselves with a razor or single-edged razor blades, dissecting instruments and laboratory drawing books (No. 7), a number of microscope slides, cover-slips and a hand lens (x 10). Microscopes are provided in the laboratory in the Redmond Barry Building.

BOOKS

Preliminary reading:
for those without H.S.C. Biology: Sections 1, 2, 6, 7, 9, 10 and 11 in Biological Science—The Web of Life. (2nd ed. Australian Academy of Science.)
Prescribed textbook:

EXAMINATIONS

Three-hour theory examination in the August examination period, and 1-hour practical examinations in the May and November examination periods.
Dr. B. T. O. Lee (Convenor—Department of Genetics)

24 lectures; 18 hours practical work; 3rd term.

Pre-requisites: a knowledge of Chemistry and Physics to H.S.C. standard is assumed. A knowledge of H.S.C. Biology would be an advantage.

SYLLABUS

This course groups together genetics, evolution, populations and ecology, and covers the following: mitosis; meiosis; Mendelian ratios; linkage; genetics maps; phenotype/genotype interactions; chromosome structure and function; chromosome modification. The effect of evolution; gene changes and selection; genetic load; the evolution of Man. The community concept; species interactions, food chains, food webs, competition, succession. The population concept; population growth and dynamics, limiting factors. The structure and function of ecosystems; the cycling of nutrients and transfer of energy. The biosphere. Agricultural and urban ecosystems. Limits to growth of human populations. The effects of man on ecosystems, environmental quality and pollution.

Practical work to involve genetic experiments on insects, plants, fungi and man.

EQUIPMENT

Students must provide themselves with a razor or single-edged razor-blades, dissecting instruments and laboratory drawing books (No. 7), a number of microscope slides, cover-slips and a hand lens (x 10). Microscopes are provided in the laboratory in the Redmond Barry Building.

BOOKS

(a) Preliminary reading:
For those without H.S.C. Biology: Sections 3, 4, 5, 6, 10 and 11 in Biological Science—The Web of Life. (2nd ed. Australian Academy of Science.)

(b) Prescribed textbook:
There is no prescribed text, but a reading list will be available at the commencement of the course.

EXAMINATIONS

Two hours in November.

610—006. CHEMISTRY (VETERINARY COURSE)

A course of three lectures per week with laboratory work throughout the year.

A knowledge of Chemistry to the standard prescribed for the Higher School Certificate examination will be assumed in the course.

SYLLABUS

(1) Physical Chemistry

Thermodynamics; heat and work: functions of state, U and H; heat of reaction, heat of formation; heat capacity. Chemical equilibrium; homogeneous and heterogeneous equilibria in gases. Properties of electrolytes as found from conductance measurements; molar conductance; independent ionic migration; conductometric titrations. Reversible cells, reduction potentials; Nernst equation; half cells, cell reactions; equilibrium constants; free energy changes during cell reactions, relation to equilibrium constants, standard free energies. Entropy and the second law. Electrolysis; decomposition and discharge potentials, order of discharge. Acid-base equilibria; buffer solutions; indicators, titration curves. Solubility equilibria; calculation of solubilities involving simultaneous equilibria, complex ions; precipitation titrations. Gases; kinetic theory; deviations from ideal behaviour; liquefaction. Phase equilibria; one component systems, P-V and P-T diagrams; two component systems; gas-liquid, liquid-liquid and liquid-solid systems; partial miscibility, distribution law; ideal and non-ideal solutions; distillation, azeotropes.
Solutions; colligative properties, molecular weights of solutes.
Osmosis. Ion exchange.
Surface chemistry: absorption at surfaces, detergent action.
Colloid chemistry; hydrophobic and hydrophilic colloids; sols and gels.
Chemical kinetics; rate laws, order of reaction; effect of temperature; simple collision model, energy distributions, activation energy; effect of catalysts and radiation.

(ii) Inorganic Chemistry
Atomic structure and the theory of valence; relation of the properties of solids and liquids to bond type. Hydrogen bonding.
Transition metals and co-ordination chemistry.

(iii) Organic Chemistry
The scope of organic chemistry; structure and biological significance of organic compounds. Bonding, structure and elementary stereochemistry of carbon compounds.
An outline of the chemistry of hydrocarbons and the major groups of monofunctional compounds in terms of molecular structure and elementary electronic theory.

LABORATORY WORK
Three hours per week, covering quantitative analytical chemistry, general inorganic, physical and organic chemistry, the experiments being chosen to illustrate and amplify the theory course.
The practical classes for this subject are taken in the Biological and Engineering Chemistry Laboratory of the Redmond Barry Building.

BOOKS
(a) Recommended for preliminary reading:
Stranks, D. R., et al., Chemistry—A Structural View. (M.U.P.)
The content of lectures will be based on the assumption that all students have read Stranks, et al.

(b) Prescribed textbooks:
*Aylward, G. H., and Findlay, T. J. V. (Eds.), SI Chemical Data (2nd ed., Wiley, 1974.)
Experiments in Inorganic Chemistry.
Experiments in Physical Chemistry.
Experiments in Organic Chemistry.

EXAMINATION
There will be a 3-hour examination in general chemistry and a 1½-hour examination in organic chemistry which may be held either at the end of the year or in stages during the Science Faculty examination periods at the end of each term. Students will be advised of the form of the examination at the beginning of the year.

200-111. AGRONOMY
Co-ordinator: Dr. J. H. Wilson

A course of 40 hours of lectures, practical work and demonstrations.

SYLLABUS
Types of plants—pasture plants; grasses, legumes—crops; cereals, fodder crops—weeds. Toxic plants.
The plant environment; soil, air, climate. Concepts of plant growth and development. Effects of environmental factors on crop and pasture development; hydrologic cycle, mineral nutrition, nitrogen cycle.
Pastures; botanical composition, types of pasture, management—establishing, fertilizing, irrigating, grazing.
Fodder conservation; hay, silage, grain and grain by-products.
Quality aspects of fodder.
BOOKS
Recommended for reference:
(Cheshire, Metric ed., 1975.)
M.U.P., 1970.)
1974.)

EXAMINATIONS
In addition to a written examination in fourth term, written and practical tests
may be given during the course. Marks may also be given for assignments, projects
and practical work. The timetable and weighting given to each part of the examina-
tion and details of requirements of written and practical tests will be published at
the beginning of first term.

640-008. PHYSICS (VETERINARY COURSE)
Course Advisers: Prof. B. H. J. McKellar, Drs G. C. Mason & S. N. Tovey
75 hours lectures; 60 hours laboratory.
A course of three lectures per week, with laboratory work, throughout the year.
A knowledge of Physics to the standard of the H.S.C. examination will be assumed.

SYLLABUS
Mechanics. Units and dimensions. Kinematics and dynamics. Equilibrium under
the influence of forces, animal mechanics. Gravitation. Work, energy, power. Rotational
motion, centrifuges. Conservation laws.
Properties of Materials. Elastic behaviour, microscopic and macroscopic view
Wave Motion and Sound. Simple Harmonic Motion, wave propagation. Doppler
effect. Production and detection of sound: speech and hearing. Quality of sound,
loudness, pitch. Ultrasonics.
Thermal Physics. Measurement of heat and temperature. Thermal properties of
materials: expansion, heat transfer, changes of phase. Metabolism and energy balance
in animals. Kinetic theory and thermodynamics. Diffusion and Osmosis.
Electricity and Magnetism. Electrostatic force. Conductors and insulators. Current
Electricity. Units, dimensions and measurement of electric quantities. Kirchhoff's laws.
Thermo electricity. Magnetism. Electromagnetic induction, diathermy. Simple alter-
tnering current circuits. Electromagnetic waves.
Electronics. Semi-conductor diodes and transistors. Amplification, feedback and
Mammalian eye. Optical instruments, microscopy, photography, spectrometers.
Polarization. Interference and diffraction, resolving power. Lasers. Electron micro-
scope.
Atomic & Nuclear Physics. Structure of atoms and nuclei. Evidence for quantum
behaviour. Spectra. X-rays: production and interaction with matter, biological applica-
tions. Radioactivity, tracer techniques, activation analysis. Biological effects of
radiation, dosimetry. Accelerators, sub-nuclear particles.
Computers. Types, methods of use, applications in the life sciences.

LABORATORY WORK
Three hours per week. Laboratory classes may not proceed throughout the
entire academic year. Attendance at practical classes is compulsory. The practical
work of each student is examined continually during each term; records of his success
in experiment and impressions of his work are kept. This information is taken into
account in assessing the results (including the Class List) at the Annual Examina-
tion. An additional test in practical work may be given.
**EXAMINATION**

Two written papers for Pass and Honours combined—one during the year and one final, totalling three hours.

**SECOND YEAR**

200-211. ANIMAL PRODUCTION I

(Veterinary Course)

Dr. Beilharz, Mr. Dunkin, Dr. Pearce, Professor Tulloh

The course consists of 52 hours of lectures (2 lectures per week), and 78 hours of demonstrations and practical classes (3 hours per week). An excursion to a country district takes place either during the vacation between first and second terms or during the vacation between second and third terms.

**SYLLABUS**

*Animal Management procedures* on the farm covering each major animal industry; the annual programme of farm activities in relation to each type of herd and flock; procedures covered include feeding, breeding, housing, rearing, harvesting of animal products, marketing.

*Animal breeding.* Genetic principles—frequencies of genes and genotypes in populations; Hardy-Weinberg equilibrium; forces that change frequencies; migration, mutation, selection, chance; interaction of forces.

Inbreeding; other types of mating.

Introduction to traits of continuous variation. Values and means, breeding value, deviations due to dominance, epistasis, environment. Variance, genotypic and environmental components. Resemblance of relatives; genetic, environmental and phenotypic covariance. Heritability and its estimation.

*Breeding plans*—selection; response and measurement, results of experiments; methods of selection, relative merits of methods. Inbreeding and crossbreeding; inbreeding depression, heterosis, effect on variance; methods of utilizing heterosis. Breed structure. Survey of actual breeding practices.

*Utilization of pasture and stored feeds by animals.* Pasture management, including maintenance of swards, high stocking rates, pasture saving, rotational and fixed grazing, strip grazing, zero grazing, dry farming, irrigation farming. The processing and utilization of pastures and crops as stored feeds (hay, ensilage, grain, grain mixtures).

**BOOKS**

- Hammond, J., *Farm Animals.* (Arnold.)
- Belschner, H. G., *Sheep Management and Diseases.* (Angus & Robertson.)
- Department of Agriculture of Victoria. (State Departmental Journals and Bulletins.)
- Falconer, D. S., *Introduction to Quantitative Genetics.* (Oliver and Boyd.)
- Lerner, I., *Heredity, Evolution and Society.* (Freeman.)
Alexander, G. and Williams, O. B. (eds.), *The Pastoral Industries of Australia.*
(Sydney U.P., 1973.)

**PRACTICAL WORK**

Students must complete six weeks of practical farm work before the annual examination. This work must be carried out on farms approved by the Professor of Animal Production and must satisfy the provisions approved by the Faculty. A Practical Animal Production Record Book must be completed with respect to one period of practical work undertaken.

**EXAMINATION**

In addition to a 3-hour written paper in the examination term, written and practical tests may be given throughout the year. Marks may also be given for assignments, collections, projects and practical work. The timetable and the weight given to each part of the examination will be published at the beginning of first term.

260–201. VETERINARY ANATOMY

**Dr. Watson**

The course consists of approximately 75 lectures and 175 hours of practical work and tutorials.

**SYLLABUS**

The aim of the course is to provide veterinary students with a general understanding of the gross morphology of the domestic animals. The lecture course follows the systematic approach with the emphasis on principles and the relationship between structure and function.

Time allocated to practical work is spent in dissecting appropriate specimens to gain experience in recognizing structures and organs, together with their location and relationships. Students are also expected to familiarize themselves with the prepared specimens on display in the anatomy rooms.

**EQUIPMENT**

White laboratory coats must be worn in all practical classes. Dissecting instruments must be brought to all practical periods.

**BOOKS**

*Miller, M. E., Anatomy of the Dog.* (Saunders 1964.)
or *Sisson, S. and Grossman, J. D., The Anatomy of the Domestic Animals.* (Saunders 1953.)

**EXAMINATION**

One three hour written paper at the final examination, together with practical and oral examinations as required. The marks obtained for assignments and assessments of practical work carried out during the year may be taken into account.

260–202. VETERINARY HISTOLOGY AND EMBRYOLOGY

**Dr. O'Shea, Dr. Leo**

The course consists of two lectures and four hours of laboratory work per week.

**SYLLABUS**

(1) **Histology**

The lectures will embrace cell structure, the basic tissues of the body, and the histology of the body systems. Emphasis will be placed on relationships between structure and function, at both the light and electron microscope levels.
Practical work will be closely linked to the lecture course, and additional instruction will be given in microscopy and histological techniques. Sets of slides are provided.

(2) Embryology

Mammalian embryology will be studied using the pig as a type animal. Comparative aspects will also be included. The course will cover the early stages of embryogenesis, development of the major body systems, and the formation of the extraembryonic membranes and placenta.

Practical work will illustrate aspects of the lecture course.

Details of the requirements for practical classes will be provided at the beginning of first term.

BOOKS

(a) Prescribed textbooks:


EXAMINATION

The examination will consist of one 3-hour written paper, a practical examination, and an assessment of practical work during the year. Oral examinations will be held if necessary.

260-203. VETERINARY BIOCHEMISTRY

Dr. J. G. McLean

The course will consist of two lectures and three hours of laboratory work per week.

SYLLABUS

The course will provide a general introduction to biochemical principles and techniques, particularly as they apply to the domestic animals. The lecture course will cover the physical and chemical properties of biologically important compounds and their metabolism. Emphasis will be placed on integration and control of metabolic processes, particularly as they occur in the intact animal under varying conditions. The aim will be to provide a knowledge of biochemistry which will give insight into normal and abnormal function presented in other parts of the curriculum.

The laboratory classes will include exercises designed to illustrate and supplement the lecture course, and will provide instruction in the use of biochemical techniques and instrumentation.

BOOKS

There is no prescribed text but a reading list will be available at the commencement of the course.

EXAMINATIONS

One three-hour written paper and practical and/or oral examinations where necessary. Progress examinations and assignments may be given during the year.

260-204. VETERINARY PHYSIOLOGY I

Professor Steel, Dr. Titchen, Dr. Brook

A course of approximately 50 lectures with 75 hours of practical classes, discussion periods and lecture demonstrations given in the Department of Veterinary Preclinical Sciences in the Second Year.

SYLLABUS

The lecture course will provide an introduction to the principles of mammalian physiology. These will be illustrated by considering the physiology of blood, circulation, respiration, kidney, nervous system and related topics. Where necessary, attention will be given to physiological phenomena of special interest in domestic animals.
Efforts will be made to arrange parallel consideration of topics that are also given specific attention in the other preclinical subjects. The practical classes will supplement the lectures and provide an introduction to the techniques used for observing physiological processes.

At the beginning of first term students will be advised of their requirements for practical classes.

BOOKS


* Either of these books is a suitable text.

EXAMINATIONS

One 3-hour written paper. Practical and/or oral examinations if necessary. Progressive assessment during the year may include essays or other assignments.

THIRD YEAR

200-311. ANIMAL PRODUCTION 2

(Veterinary Course)

Professors Tribe and Tulloh, Mr. Dunkin, Mr. Morris, Dr. Pearce, Mr. Tuck

A course of 52 lectures (two lectures per week) and 78 hours of demonstrations, discussion periods, practical classes and half-day excursions (3 hours per week). An excursion to a country district takes place either during the vacation between first and second terms or during the vacation between second and third terms.

SYLLABUS

(i) Ruminant nutrition—principles of ruminant digestion; the nutrition of young ruminants.

(ii) Non-ruminant nutrition—principles of non-ruminant digestion; the nutritional problems of non-ruminants, particularly those associated with pigs and poultry.

(iii) Mineral and vitamin nutrition.

(iv) Feeding standards—units of measurement of composition and nutritive value of feedstuffs; nitrogen balance, digestibility trials, chemical analysis of rations, biological evaluation; starch equivalents; total digestible nutrients, digestible protein, net energy; the compilation and use of feeding standards.

(v) Feeding systems—Practical formulation of rations for all classes of livestock, supplementary feeding, drought feeding, urea feeding; intensive feeding practices.

(vi) Growth and development of farm animals in relation to management practices, meat quality.

(vii) Veterinary economics—principles of farm management economics with particular reference to veterinary activities. The role of agriculture in the national economy.

(viii) Assessment of animal management systems.

(ix) Animal behaviour—principles.

BOOKS

*Church, D. C., Digestive Physiology and Nutrition of Ruminants, 3 vols. (D. C. Church, Oregon State Univ. Book Stores, 1972.)

Hammond, J., Farm Animals. (Arnold.)

Hammond, J. (ed.), Progress in the Physiology of Farm Animals. Vols I-III. (Butterworth.)


Ministry of Agriculture and Fisheries, Rations for Livestock.

Morrison, F. B., Feeds and Feeding. (Morrison.)

Bishop, C. E., and Toussaint, W. D., Introduction to Agricultural Economic Analysis. (J. Wiley and Sons, 1958.)

Castle, E. N., and Becker, M. H., Farm Business Management. (Macmillan, 1964.)
PRACTICAL WORK

Students must have completed a total of not less than 12 weeks of practical farm work during the first three years of the Veterinary course. This work is to be completed before the annual examination in Third Year. The work must be carried out on farms approved by the Professor of Animal Production and must satisfy the provisions approved by the Faculty. A Practical Animal Production Record Book must be completed with respect to one period of practical farm work carried out during the year prior to the annual examination.

EXAMINATION

In addition to a 3-hour written paper in the examination term, written and practical tests may be given throughout the year. Marks may also be given for assignments, projects and practical work. The timetable and the weight given to each part of the examination will be published at the beginning of first term.

270–301. VETERINARY MICROBIOLOGY
Dr. Hughes, Dr. Studdert

A course of approximately 80 lectures and 160 hours of laboratory work.

SYLLABUS

The lecture course will consider the morphology and physiology of fungi, bacteria and viruses, the properties which enable them to cause disease, basic immunological phenomena and serological techniques applicable to veterinary medicine. It will conduct a systematic study of the individual micro-organisms of veterinary importance with special reference to differentiation, pathogenicity, epidemiology, chemotherapy, disinfection and sterilization.

The practical work will include exercises to complement the lecture course.

BOOKS

* Seddon, H. R., Diseases of Domestic Animals in Australia. (2nd ed., reviewed by H. E. Albiston, Canberra Govt Printer.)
*1965 Part 5 Bacterial Diseases, Vols. I and II.
*1966 Part 4 Protozoan & Virus Diseases.

EQUIPMENT

White laboratory coats are required for all laboratory classes. Manuals for use in practical classes may be obtained from the Department.

EXAMINATION

A 3-hour written examination and a 2-hour practical examination will be held in November. Progress tests may be held throughout the year.

270–302. VETERINARY PARASITOLOGY
Mr. Arundel, Dr. Rickard

A course of approximately 50 lectures and 80 hours of practical work.

SYLLABUS

The course will embrace lectures on veterinary helminthology, entomology and protozoology, biology and life-cycles of organisms in each class, properties which

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enable the organisms to cause disease, responses of the host to infection including immunological states, and differential characteristics of the organisms of veterinary importance.

The practical work will include exercises directly related to the lecture course.

**BOOKS**


*SEDDON, H. R., *Diseases of Domestic Animals in Australia. (2nd ed., reviewed by H. E. Albiston, Canberra Gov. Printer.)

*1966 Part 4 Protozoan & Virus Diseases.

*1968 Part 1 Helminth Infestations.


*1968 Part 3 Tick and Mite Infestation.

**EXAMINATION**

One mid-year practical examination, 2 hours. One 3-hour written test. One 3-hour practical test. *Viva voce* examination if necessary.

**270-303. VETERINARY PATHOLOGY**

Dr. Wells, Dr. Jabara

A course of approximately 40 lectures and 90 hours practical work over three terms.

**SYLLABUS**

The lectures are devoted to general pathological processes, including the role of the reticuloendothelial system in disease; cellular degeneration and necrosis; inflammation, repair and regeneration; circulatory disturbances; tissue responses to injurious agents of a physical, chemical and biological nature; disturbances of growth, including neoplasia; and the role of hereditary processes in disease.

The practical work is orientated towards experimental pathology and histopathology.

Study sets of slides are provided. A fee is charged for the use of microscopes. Students are required to provide dissecting instruments and white laboratory coats.

**BOOKS**

*Robbins, S. L., Pathologic Basis of Disease. (Saunders, 1974.)


**EXAMINATION**

One 3-hour theory paper. One 2-hour practical examination on macroscopic and microscopic specimens. Course assessment is also based on class work during the year, practical book and essays. *Viva voce* examination if necessary.

**260-304. VETERINARY PHYSIOLOGY 2**

Professor Steel, Dr. Titchen, Dr. Brook

A course of approximately 38 lectures with 75 hours of practical classes, discussion periods and lecture demonstrations given in the Department of Veterinary Preclinical Sciences in the Third Year.

**SYLLABUS**

This course follows the mammalian physiology done previously (260-204). It includes study of the nervous system, digestive system, endocrine glands and related topics. Particular attention is paid to the physiology of digestion in ruminants. Where appropriate parallel consideration of material being dealt with by other
subjects is undertaken. Practical work and demonstrations are designed to acquaint students with methods used in physiological investigations into the above and related topics.

BOOKS


EXAMINATIONS

One 3-hour written paper. Practical and/or oral examinations if necessary. Progressive assessment during the year may include essays or other assignments.

260–305. VETERINARY PHARMACOLOGY

Mr. Stewart

A course of approximately 44 lectures and 68 hours of practical classes given in the Department of Veterinary Preclinical Sciences in the Third Year.

SYLLABUS

The course is designed to provide the student with an understanding of drug action and the effects of drugs on organ function. Methods of administration, absorption, distribution, metabolism, excretion and dose-response relationships will also be considered. Drugs affecting fluid and electrolyte balance, the kidney, cardiovascular system and the autonomic nervous system are covered during the first term. This is followed by a consideration of anaesthetics and other agents acting on the central nervous system, as well as drugs affecting the respiratory system, the gastrointestinal tract and the blood forming organs. The third term is devoted to a study of chemotherapeutic agents, anti-inflammatory drugs and hormones. Practical work is arranged to illustrate the lecture course, and to demonstrate techniques used in pharmacological investigation.

BOOKS

There is no prescribed text but a reading list will be available at the commencement of the course.

EXAMINATION

One 3-hour written paper. Practical examination if required.

(CLINICAL SCIENCES)

(Fourth and Fifth Years)

The teaching of clinical and paraclinical sciences to the final two years of the BVSc course is covered in 13 courses, entitled Clinical Sciences 1 to 13. There are more explicit titles which are intended to be used in official communications.

The arrangement of the material in the curriculum precludes the use of the conventional discipline titles such as Pathology, Medicine, Surgery and Obstetrics though the material usually provided in these disciplines is still taught while considering the diseases of the particular body systems or animal species. The individual diseases are themselves arranged according to the body systems and again according to the animal species affected.

This is a form of curricular arrangement and is not necessarily related to administrative arrangements or academic groupings amongst the teaching staff, nor to practical work.

PRACTICAL WORK

Practical work is by demonstration and practices in the various clinical and paraclinical units as set out in the time-tables and detailed lists available from the departments.

EQUIPMENT

Suitable protective clothing is required for all practical work in the clinics and
laboratories. This includes rubber boots and white coats. White trousers and white T-shirts or white short-sleeved coveralls are required for surgical exercises.

EXAMINATIONS

The examination in Clinical Sciences 1 will be conducted at the end of Term One, and will consist of one 3-hour written paper. Any additional examinations could include practical and/or oral examination.

Examinations in Clinical Sciences 2, 3, 4, 5 and 6 will be conducted during the fourth term of the fourth year and will consist of one 3-hour written paper and one oral practical examination in each course. Additional oral examinations may be conducted.

The examinations in Clinical Sciences 7, 8, 9, 10 and 11 will be conducted in the fourth term of the fifth year. The examination in each course will consist of one 3-hour written paper and oral examinations. The examination in Clinical Sciences 13 will be conducted in the fourth term of the fifth year and will consist of oral and/or practical examination supplemented by in-term assessments. Examiners may take into account the reports of extra-mural supervisors on the performance of students in the Veterinary section of their extra-mural training. There will be no examination in Clinical Sciences 12.

FOURTH YEAR

Year Co-ordinator: Mr. Arundel

250-401. CLINICAL SCIENCES 1
Principles of Clinical Examination and Therapeutics

Course Co-ordinator: Mr. Christie; Professor Blood, Mr. Arundel, Dr. Hughes, Dr. Wilkinson, Mr. Wood, Dr. Gay, Mr. Speirs

SYLLABUS

A course of 126 hours of lectures, tutorials, seminars, demonstrations and practical work dealing with:

- The physical examination of a patient, including consideration of radiography, clinical parasitology, microbiology, haematology, clinical chemistry and their techniques.
- Principles of surgery, general surgical techniques, sterilization, asepsis, principles of wound healing and treatment.
- Principles of anaesthesiology, the actions and methods of administration of anaesthetic drugs.
- The use of antibiotics, anthelminthics and insecticides and the methods of their administration.

250-402. CLINICAL SCIENCES 2

Diseases of the alimentary system including the liver and the pancreas and miscellaneous conditions affecting the body as a whole

Course Co-ordinator: Mr. Wood; Dr. Gay, Dr. Wilkinson, Mr. Sullivan, Mr. Wood, Professor Blood, Mr. Mason, Mr. Speirs

SYLLABUS

A course of 112 hours of lectures, tutorials, seminars, demonstrations and practical work dealing with:

- The pathology, clinical pathology, medicine, surgery and radiological examination of the systemic diseases as they affect the body as a whole, and the alimentary system.

250-403. CLINICAL SCIENCES 3

Diseases of the Respiratory, Endocrine and Haemopoietic Systems and the Skin

Course Co-ordinator: Dr. Wilkinson; Mr. Christie, Mr. Wood, Mr. Speirs, Mr. Sullivan, Professor Blood, Dr. Studdert
SYLLABUS
A course of 103 hours of lectures, tutorials, seminars, demonstrations and practical work dealing with:
The pathology, clinical pathology, medicine, surgery and radiological examination of the respiratory, haemopoietic and endocrine systems and the skin.

250-404. CLINICAL SCIENCES 4
Diseases of the Urinary, Cardiovascular and Nervous Systems
Course Co-ordinator: Mr. Sullivan, Dr. Gay, Dr. Richards, Mr. Christie, Dr. Wilkinson
Mr. Wood, Mr. Mason

SYLLABUS
A course of 114 hours of lectures, tutorials, seminars, demonstrations and practical work dealing with:
The pathology, clinical pathology, medicine, surgery and radiological examination of the urinary, cardiovascular and nervous systems.

250-405. CLINICAL SCIENCES 5
Diseases of the Reproductive System and Mammary Gland
Course Co-ordinator: Dr. Galloway; Dr. Sloss, Mr. Wright, Mr. Christie,
Mr. Mason, Mr. Sullivan

SYLLABUS
A course of 199 hours of lectures, tutorials, seminars, demonstrations and practical work dealing with:
The physiology, pathology, clinical pathology, medicine and surgery of the reproductive tract.

250-406. CLINICAL SCIENCES 6
Diseases of the Musculoskeletal System Ear and Eye
Course Co-ordinator: Mr. Mason; Dr. Richards, Mr. Reynolds, Mr. Speirs

SYLLABUS
A course of 98 hours of lectures, tutorials, seminars, demonstrations and practical work dealing with:
Diseases of the musculoskeletal system, diseases of the eye, ear and teeth, and special surgical considerations including physical therapy.

FIFTH YEAR
Year Co-ordinator: Professor Blood

250-507. CLINICAL SCIENCES 7
Epidemiology, Preventive Medicine, Public Health and Meat Inspection
Course Co-ordinator: Mr. Morris; Dr. Hughes, Mr. Flynn, Mr. Rushford,
Mr. Gannon, Mr. Gleeson

SYLLABUS
This course of 72 lectures covers:
Principles of epidemiology, preventive medicine, veterinary public health and food hygiene; meat inspection and slaughter-house operation; the epidemiology of infectious and non-infectious diseases and the factors effecting their development in the host; methods of epidemiological investigation and research, including some statistical methods; veterinary economics; disease control planning and assessment; veterinary law; ethics; and business practice.
250-508. CLINICAL SCIENCES 8

*Diseases of Dairy Cattle*

Course Co-ordinator: Professor Blood; Mr. Arundel, Dr. Wilkinson, Dr. Richards, Mr. Morris, Dr. Cay, Dr. Sloss, Mr. Wright, Mr. Rushford

**SYLLABUS**

A course of 60 lectures dealing with diseases specifically associated with dairy cattle and with economic considerations and preventive medicine in the dairy industry.

250-509. CLINICAL SCIENCES 9

*Diseases and Preventive Medicine of Dogs and Cats, Miscellaneous Pets and Horses*

Course Co-ordinator: Dr. V. Studdert; Dr. Richards, Mr. Sullivan, Mr. Arundel, Mr. Bourke, Dr. Hughes, Dr. Sloss, Professor Blood

**SYLLABUS**

A course of 61 lectures covering:

Part One. 42 hours. The specific diseases of cats and dogs and their diagnosis and treatment with some consideration given to management. Diseases of exotic pets are also included.

Part Two. 19 hours. Equine diseases with special reference to management, economics and disease control programmes.

250-510. CLINICAL SCIENCES 10

*Diseases of Beef Cattle and Sheep*

Course Co-ordinator: Dr. Cay; Professor Blood, Dr. Hughes, Mr. Morris, Mr. Arundel, Dr. Richards, Mr. Wright.

**SYLLABUS**

A course of 48 hours dealing with all aspects of preventive medicine in beef cattle and with disease entities specifically seen in sheep and some considerations of the economics of the sheep industry.

250-511. CLINICAL SCIENCES 11

*Diseases of Pigs and Chickens*

Course Co-ordinator: Mr. Harrigan; Mr. Arundel, Dr. Smith

**SYLLABUS**

Part One. Diseases of Pigs. A course of 30 lectures on pig diseases and some aspects of management and economics.

Part Two. Diseases of Poultry. A course of 30 hours on various aspects of management and diseases of poultry.

250-512. CLINICAL SCIENCES 12

*Diseases of Wildlife*

Course Co-ordinator: Mr. Arundel

**SYLLABUS**

This is an elective, non-examinable course of lectures given by a number of authorities in specific fields such as:

- The ecology, management, reproduction and diseases of selected native and feral animals and birds, bees, goats, reptiles and laboratory animals.

250-513. CLINICAL SCIENCES 13

*Clinics*

Course Co-ordinator: Dr. Sloss

**SYLLABUS**

The course of approximately 550 hours will consist of formal and informal instruction given in the clinical and paraclinical facilities of the Veterinary Clinical Centre during the fifth year of the course. The instruction will centre around the
use of a combination of medical, surgical, gynaecological, obstetrical, pathological, microbiological, parasitological and other related techniques in the diagnosis, treatment and control of diseases on patients in the hospital and clinic. It will be based upon clinical material presented in the four weekly hours of clinical seminar, clinical tutorial and other clinico-pathological conferences, and on rostered clinical and para-clinical practical work.

An oral and/or practical examination will be conducted at the end of the fifth year. In assessing each student the results of this examination will be supplemented by in-term assessments provided by clinical instructors throughout the year. This in-term assessment will be based on each student’s intellectual and physical performance in clinical and para-clinical activities in the Veterinary Hospital and Clinic. Examiners may take into account the reports of extra-mural supervisors on the performance of students in the Veterinary section of their extra-mural training.

BOOKS

Prescribed textbooks:


Hall, L. W., *Veterinary Anaesthesia and Analgesia*. (7th ed., Bailliere, Tindall & Cassell, 1971.)


Kirk, R. W., *Current Veterinary Therapy IV or V*. (Saunders, 1971 or 1974.)

Medway, W., *et al Textbook of Veterinary Clinical Pathology*. (Williams & Wilkins, 1969.)


MASTER OF VETERINARY STUDIES

VETERINARY PATHOLOGY

Dr. W. P. Richards

The course is designed for the applicant who holds a B.V.Sc. or equivalent qualification and is intended to provide a study of appropriate phases of veterinary pathology in sufficient depth that, on completion, candidates will be competent in pathologic diagnosis and in the supportive areas of parasitology, microbiology, and clinical pathology including haematology and clinical chemistry.

Candidates may be required to attend all or part of the course of lectures and practical classes in Clinical Sciences 2, 3, 4, 5 and 6 and to participate in demonstrations of immunology and systematic microbiology. Candidates will, under supervision, carry out post-mortem examinations including microscopic examination and such ancillary examinations as directed in parasitology, microbiology and clinical pathology.

Candidates will also be required to attend such tutorials, seminars and clinico-pathological conferences as are scheduled, and may be required to prepare reports on selected topics.

The course, including the examination sessions, will extend over one full year.

The examination will consist of progressive assessment throughout the course and a terminal examination consisting of oral and practical examinations and not more than three written papers of three hours each.
VETERINARY MICROBIOLOGY
Dr. K. L. Hughes

The course is designed for the applicant who holds a B.V.Sc. or equivalent qualification and is intended to provide a study of appropriate phases of veterinary microbiology in sufficient depth that, upon completion, candidates will be competent in diagnostic microbiology.

Candidates may be required to attend all or part of the course of lectures and practical classes in Veterinary Microbiology 270–301.

The course of instruction deals with the morphology, physiology, cultivation and classification of bacteria, fungi, viruses and protozoa; bacterial genetics; the effects of chemical and physical agents on growth and death of microbes; mechanisms of sensitivity and resistance to antibiotics and other chemotherapeutic agents; preparation of culture media; the "normal flora", a systematic study of the recognition of pathogenic microbes; pathogenesis and control of microbial diseases; principles of epidemiology; sources of infection; resistance of the host; immunity; serological and allergic reactions; preparation of vaccines, antitoxic and antibacterial sera and their practical application; biological standards.

In practical work candidates will, under supervision, carry out gross and microscopic examination of pathological material. Candidates will be required to develop proficiency in: the isolation and identification of saprophytic and pathogenic bacteria, fungi and protozoa; general microbiological techniques (e.g. lyophilization and maintenance of stock cultures; bacteriophage typing); preparation and standardization of vaccines; in vitro and in vivo serological tests; basic tissue culture techniques; inoculation of eggs, animals and tissue cultures with viruses and clammydia; interpretation of results and diagnosis of disease.

Candidates will also be required to attend such tutorials, seminars, and clinicopathological conferences as are scheduled, and may be required to prepare reports on selected topics.

The course, including the examination session, will extend over one full year.

The examination will consist of progressive assessment throughout the course and a terminal examination consisting of oral and practical examination and not more than 2 written papers of not more than 3 hours each.

VETERINARY PARASITOLOGY
Mr. J. I. Arundel

The course is intended to provide a study of appropriate phases of parasitology in sufficient depth so that, on completion, the candidate is competent in diagnostic parasitology and the principles of control.

Candidates may be required to attend all or part of the course in Veterinary Parasitology 270–302, and those lectures dealing with parasitic diseases in Clinical Sciences 8, 9, 10 and 11.

The course of instruction will deal with taxonomy and the principles of classification of helminths, arthropods and protozoa; preparation of specimens for examination, diagnostic techniques and their evaluation, the reaction of the host to infection, epidemiology of parasitic diseases and their control, and the use of drugs in prevention and treatment.

Candidates will be required to attend such tutorials, seminars and clinicopathological conferences as are scheduled, and may be required to prepare reports on selected topics. Candidates may also be required to submit a dissertation of not more than 10,000 words on a selected topic.

The examination will consist of progressive assessment throughout the course and a terminal examination consisting of oral and practical examinations and not more than three written papers of three hours each. If a dissertation is required it will count towards the final assessment.

The course, including the examination session will extend over one full year.

VETERINARY ANATOMY
Dr. J. W. Watson

A course designed as a basis for study of the topographical, systematic and functional anatomy of animals with special reference to species differences and
specializations of structure associated with particular functions.

A candidate may be required to attend all or part of the lectures and laboratory work in Veterinary Anatomy 260-201.

The course of instruction includes dissections of prepared and fresh specimens with special reference to the musculo-skeletal, visceral and nervous systems of one or more species. A candidate may be required:

- to undertake the detailed preparation of dissections of one or more selected regions of the body and to employ techniques ancillary to dissection to display the innervation, vascular and lymphatic arrangements of the regions.
- to develop a familiarity with the methods employed in the acquisition and presentation of anatomical data, and with methods used in the preservation and maintenance of anatomical specimens.
- to attend lectures, tutorials, seminars and courses of instruction in addition to those specified herein.
- to submit a dissertation of not more than ten thousand words on a directed topic and take such written oral and practical examinations as required and not less than one or more than two, three hour written papers. The dissertation shall be used as an indication of the candidate's detailed knowledge of one aspect of anatomy and shall include an account of the techniques and the data obtained in gaining that knowledge.

Alternatively the candidate may be required to take such written, oral and practical examinations as required and not less than 3 and not more than 4 written papers of three hours each.

The course including the examination session will extend over one full academic year and may be extended by one term to permit the completion of required practical work and the dissertation.

VETERINARY HISTOLOGY AND EMBRYOLOGY

Dr. J. D. O'Shea

This course is designed to provide for advanced studies in animal histology and embryology, with special reference to the domestic animals.

The course will involve studies on the microscopic structure and ultrastructure of animal cells, tissues and organs, with emphasis on comparative and functional aspects; comparative mammalian embryology; techniques used in the study of histology and embryology, and the ways in which different techniques can contribute to advances in knowledge and understanding.

Candidates will be required to develop competence in current techniques of tissue preservation and preparation, including histochemical and special techniques, microscopy and photomicrography.

Candidates may also be required—

- to attend all or part of the lectures and laboratory work in the Veterinary Histology and Embryology 260-202.
- to undertake directed reading and attend such other lectures, tutorials, seminars or classes as may be directed;
- to submit a dissertation of not more than ten thousand words on a directed topic. If such a dissertation is required, it will count for the purposes of examination as two written papers each of three hours duration, and will be used as an indication of the candidate's detailed knowledge of one aspect of histology or embryology, and of the techniques and data which have contributed to gaining that knowledge.

The examination shall consist of such combination of written papers, oral and practical examinations and dissertation as shall bring the total to the equivalent of not less than three and not more than four written papers, each of three hours.

The course, including the examination session, will extend over one year.

VETERINARY BIOCHEMISTRY

Dr. J. G. McLean

This course is intended for the applicant who holds a BVSc or equivalent qualification and is designed to provide advanced studies of biochemical principles and techniques, particularly as they apply to the domestic animals.
The course of instruction will deal with the molecular components of the cell, metabolic processes and their control, and the integrated metabolism of the whole animal. It will include consideration of the biochemical basis of body processes, and applications in such fields as nutrition, disease investigation, toxicology, performance, production, growth and development will be indicated. Instruction in laboratory work, using modern biochemical techniques and instrumentation, will be provided.

Candidates may be required:
- to attend all or part of the lectures and laboratory classes in Veterinary Biochemistry 260-203;
- to undertake directed reading and submit essays on specified topics;
- to attend such tutorials, seminars and other classes as directed;
- to undertake supervised practical work and submit any reports that may be required.

The examination will consist of oral and practical examinations, and not more than two written papers of three hours each. The assessment will also include any dissertation or essays required during the course.

The course, including the examination session, will extend over one full year.

VETERINARY PHYSIOLOGY AND PHARMACOLOGY

Professor Steel

The course is intended for the applicant who holds a BVSc or equivalent qualification and is designed to provide advanced studies in physiology and/or pharmacology as they apply to the domestic animals.

The studies undertaken will require candidates to obtain a good understanding of general physiological and/or pharmacological principles and to study at least one aspect in depth. This in depth study may be directed towards a particular species or specialized topics. Candidates will also be required to develop competence with techniques and instrumentation used in physiological investigations.

Candidates may be required:
- to attend all or part of the lectures and laboratory classes in Veterinary Physiology (260-204, 304) and/or Pharmacology (260-305);
- to undertake directed reading and submit essays on specified topics;
- to attend such other lectures, tutorials, seminars and other classes as may be directed;
- to undertake supervised practical work and submit any reports that may be required.

The examination shall consist of such combination of written papers, oral and practical examinations, essays and dissertation as shall bring the total to the equivalent of not less than three and not more than four written papers, each of three hours.

The course, including examination session, will extend over one full year.

EQUINE CLINICAL STUDIES

Mr. T. A. Mason

The course is designed for the applicant who holds a BVSc degree or equivalent qualification and is intended to provide an advanced study of the diseases of the horse.

The course will extend over one full year.

Candidates may be required to attend lectures and practical classes in selected parts of the undergraduate curriculum.

Appropriate practical work will be arranged and will include participation in diagnosis and treatment. Training in anaesthesiology and surgery will be provided and will include both practical exercises and participation in the management of clinical cases.

Candidates will also be required to attend tutorials, seminars and clinico-pathological conferences in the Department of Veterinary Clinical Sciences. Liaison with the Department of Veterinary Paraclinical Sciences, particularly in the fields of gross pathology and parasitology, and with the Department of Veterinary Preclinical Sciences particularly with respect to the biochemistry and physiology of exercise, will be encouraged.
Candidates may be required to submit two essays on approved topics during the course. Examination will be by progressive assessment throughout the course, not more than two written papers of three hours each and an oral examination.

**VETERINARY EPIDEMIOLOGY AND PREVENTIVE MEDICINE**

Mr. Morris, Dr. Hughes, Professor Blood, Mr. Arundel

The course is designed for the applicant who holds a BVSc degree or equivalent qualification, and is intended to provide advanced study in epidemiological principles and techniques, and their application to the prevention of disease in animals.

The course of instruction will deal with principles of epidemiology (in relation to infectious and non-infectious diseases), and with methods of epidemiological investigation and analysis. These principles will then be applied to the design and evaluation of disease control procedures and programmes, at both the single-unit level (herd health programmes and similar activities), and at the population level (national control programmes, veterinary public health and food hygiene activities). The training will also include the application of ecological, economic and sociological principles to the design of disease control systems under varying circumstances of livestock management; the application of administrative management techniques to veterinary administration; and methods of data processing, computing and statistical analysis which are relevant to the primary purposes of the course. There will be some opportunity for candidates to pay particular attention to aspects which will be most relevant to their future activities.

Candidates may be required:

- to attend part or all of the course in Veterinary Epidemiology and Preventive Medicine (Clinical Sciences 7), and associated material taught in other courses (Clinical Sciences 8, 9, 10 and 11);
- to attend tutorials, seminars and other classes as directed;
- to undertake practical work in the form of participation in the work of the Departments concerned, in so far as it is relevant to their training;
- to undertake directed reading and submit essays and other assignments based on this reading and on the practical work undertaken;
- to undertake the investigation of a topic related to the material imparted in the course (such as the analysis of available pre-existing epidemiological data on a disease), and to prepare a report on the findings obtained in the investigation.

Candidates will be required to take up to two written examinations each of no more than three hours' duration, and such oral and practical examinations as may be required. Assessment of candidates will be by means of these examinations together with the results of exercises undertaken during the course.

The course will extend over one full year, usually commencing on the first day of the first term. The last three months of the course will be used mainly for the investigation work described above.
FACULTY OF VETERINARY SCIENCE

TIME-TABLE FOR 1976

Note: (a) Lecture times are in heavy type.  
(b) These times are shown for general guidance only and may be changed to suit staff and accommodation available.

FIRST YEAR

The time-table for First Year will be given to Students when they attend to accept offers of places.

SECOND YEAR

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<th>SUBJECTS</th>
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THIRD YEAR

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The time-tables for the Fourth and Fifth Years of the course will be posted on the School of Veterinary Science notice boards in due course.

* Detailed arrangements will be announced at the beginning of each term.
CONTINUING EDUCATION COURSES

The Office for Continuing Education was established to develop the University’s role in Continuing Education. Courses provided by the Office include ones of interest to specific professional, vocational or community groups and others closely related to the disciplines taught within the University.

In making these courses available, it is the University’s intention that persons who wish to pursue an educational interest or, who wish to enrich their earlier education, should be able to experience tertiary education in the area of their interest. Some Continuing Education courses have been specially developed to meet the needs of particular professional, vocational or community groups and include short refresher courses, seminars and summer schools. Other courses have been developed as courses of general interest and are based on a wide range of disciplines covered within the normal teaching of the University.

Details of all Continuing Education courses are available from the Continuing Education Office and potential students, seeking courses for particular areas, should enquire at the Office for Continuing Education concerning the range and availability of such courses. It should be noted that the taking of Continuing Education courses is unlikely to be of direct assistance in gaining selection for normal degree or diploma courses and a studies taken within these courses will not be credited subsequently towards a degree or diploma. In some cases, however, some form of examination or assessment may form part of a Continuing Education course and detailed arrangements will be made through the Office for Continuing Education.

In all cases, departments offering courses reserve the right to exclude applicants on any of the following grounds:

1. Inadequate prior qualifications including failure to satisfy any prerequisites which may apply;
2. Lack of space in the course concerned.

Intending students must complete an application form, obtainable in December and January from the Office for Continuing Education or faculty offices, by January 31. Successful applicants will be notified and will be required to complete enrolment details, including payment of fees, with the Office for Continuing Education.

The Office for Continuing Education, which is situated on the ground floor of the Appointments Board building, is responsible only for enrolments in Continuing Education courses. Information about other methods of enrolment for degree studies, including additional studies, complementary courses, admission ad eundem statum etc., are all dealt with in faculty offices and enrolments are made through the Students’ Records office.

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