University College Dublin
National University of Ireland, Dublin

Veterinary Medicine

Session 2003/2004

Dates of Terms for MVB Course

Session 2003/2004

Semester 1:

Michaelmas Lecture Term	15 September	–	05 December	12 weeks
Examinations	08 December	–	14 December	1 week

Semester 2:

Hilary Lecture Term	05 January	–	27 February	8 weeks
Break	01 March	–	19 March	3 weeks
Trinity Lecture Term	22 March	–	16 April	4 weeks
Revision	19 April	–	24 April	1 week
Examinations	28 April			

Easter Sunday: 11 April, 2004

Autumn Repeat Examinations: 09 August, 2004

Timetables

Timetables of lectures, practicals, tutorials etc. will be available at the commencement of the session from the departmental offices.

Faculty of Veterinary Medicine Office

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Dean of the Faculty:	Professor Boyd R. Jones
Associate Dean (Teaching and Learning):	Dr. Michael L. Doherty
Associate Dean (Research):	Dr. Grace Mulcahy
Senior Faculty Administrator:	Ms. Barbara A. Clarke
Student Advisors:	Rev. Cecil Bryan (Chaplain) Rev. John McNerney (Chaplain) Ms. Colleen Blaney

Heads of Academic Departments

Veterinary Anatomy	Professor Stephen Carrington
Veterinary Physiology and Biochemistry	Professor Alan Baird
Animal Husbandry and Production	Dr. Mark Crowe
Veterinary Microbiology and Parasitology	Dr. Bryan Markey
Veterinary Pathology	Dr. Joseph Cassidy
Small Animal Clinical Studies	Dr. Carmel Mooney
Large Animal Clinical Studies	Professor J. D. Collins
Veterinary Surgery	Professor Chris Bellenger

Academic Advisory Meeting

Faculty Advisory Session - First Year	10.00 a.m. Wednesday, 10th September, 2003
First day of lectures	Monday, 15th September, 2003

Contents

Degree of Bachelor of Veterinary Medicine (MVB)

General Information

1. This degree enables the holder to be registered on the Register of the Veterinary Council of Ireland. Only persons so registered are entitled to practise as veterinary surgeons in the Republic of Ireland. Holders of this degree, provided they are EU nationals, are also, under the EU Directives, entitled to register and practise in the United Kingdom and in all other EU countries.

2. The programme of study for the degree extends over a period of five years. Courses are taken at the Faculty of Veterinary Medicine, University College Dublin, Belfield; and at the University farm at Lyons Estate, Newcastle, Co. Dublin.

3. The number of new entrants to the First Veterinary Medicine Year will be limited. As the number of applicants far exceeds the number of places available, places are offered strictly on the basis of academic achievement.

4. Students intending to proceed to this degree must comply with the regulations regarding entry to the University.

5. Students are required to become proficient in the handling and management of a variety of animal species and are allocated an appropriate programme of farm and companion animal experience up to a maximum of ten weeks, following interview. This experience should be obtained between the Christmas vacation of the first veterinary year and the end of the Easter break of the second veterinary year. Students are designated a staff supervisor who approves the farm or animal facilities proposed. The completion of this requirement to the satisfaction of the student's supervisor is a prerequisite for passing the Animal Husbandry and Production examination.

6. Students are required to have passed the University Examinations in full before being permitted to proceed to the courses of the following year. The University Examinations will be held in the Summer and Supplemental Examinations will be held in the Autumn for those students who fail in the Summer and for those students who have special permission from the President. Students who fail a Supplemental Examination will be interviewed by the Faculty's Student Progress Committee.

7. Each University Examination must be passed within two years of the date of entry to the course for that examination. Students who obtain a pass mark in the First Veterinary Medicine Examination in one subject in the Summer will be exempt from further examination in that subject in the Autumn examination of the same year. Students who fail in either subject in the First Veterinary Medicine Examination must present in both subjects at the next attempt. A candidate who fails with less than 40% in both subjects in the Autumn examination will be excluded from the course.

   Students who pass in any subject or subjects of the Final Veterinary Examination will be exempted in that subject or subjects, the exemption to hold for a period of two years.

Students who fail a subject in the Final Veterinary Examination in the Summer may be required to attend the University Veterinary Hospital prior to taking that examination in the Autumn of that year.

In special circumstances, i.e. on the grounds of ill health or for some other grave reason, the Faculty may recommend the extension of the one-year rule and of the two-year rule.

8. Students who do not pass one or more subjects of the University Examinations may be required to re-attend courses before being permitted to present for the examination in the following Summer.

9. (i) Before sitting for the Final Veterinary Medicine Examination, the candidate must produce a certificate or certificates showing that he/she has spent a minimum of 24 weeks' *Seeing Practice*, preferably commencing at the Easter vacation of his/her third year.

(ii) At the beginning of the second semester, the candidate must produce a certificate or certificates showing that he/she has spent a minimum of 20 weeks' *Seeing Practice*.

(iii) The student is required to obtain experience in each of the following types of practice, all of which shall count towards the mandatory period:

(a) Farm Animal Practice – 5 weeks minimum;

Small Animal Practice – 5 weeks minimum;

Equine Practice – 3 weeks minimum.

It is recommended that the student gain experience in a number of practices. The practices selected should deal predominantly with the species indicated in *(a), (b)* and *(c)*.

(iv) The student is encouraged to gain experience in a veterinary investigation centre or an approved laboratory. Up to four weeks will count toward the mandatory *Seeing Practice* period.

(v) Attendance at the University hospital/clinic will count for two weeks of the *Seeing Practice* period.

(vi) Holders of Training Scholarships will be allowed credit for up to nine weeks *Seeing Practice* for time spent at an approved centre.

(vii) As part of *Seeing Practice*, the student shall be required to spend two weeks at export meat plants following the completion of the fourth year.

(viii) During the mandatory period of *Seeing Practice*, the student must keep a diary which will provide information on cases seen. The student shall be required to obtain certificates from veterinary practitioners or in the case of export meat plants from a Veterinary Inspector of the Department of Agriculture, Food and Forestry to cover the minimum period.

9. **New Regulations to apply to third year class in 2000/2001 and each class thereafter.**

(i) During the third, fourth and fifth years of the course, students are required to complete a minimum period of 24 weeks of practical extra-mural experience. This experience is to be spread over the three years as follows:

Third year (Christmas, Easter and Summer vacations)	8-10 weeks suggested (clinical)
Fourth year (Christmas, Easter and Summer vacations)	10-12 weeks (clinical) 2 weeks (meat plant)
Final year (Christmas and Easter vacations)	2-4 weeks (clinical)

(ii) Students are assigned to a Clinical Tutor in third year. The 24 clinical weeks* to be spent with practising veterinary surgeons should include a minimum of:

- 2 weeks equine practice
- 4 weeks small animal practice
- 6 weeks farm animal or mixed practice.

(iii) The remainder of the time can be spent in practices, hospitals, laboratories, District Veterinary Offices (DVO), etc. selected by the individual student and approved in advance by the Faculty.

(iv) Each student will spend two full weeks in an approved meat plant and one full week in a PDSA Centre.

(v) Up to 6 weeks may be spent overseas (up to 15 weeks with the approval of the Chair of the Clinical Division).

(vi) Certification of Attendance:
For each placement a progress sheet (Form PS/100) must be signed by the senior supervising veterinary surgeon certifying that a specified period of study has been completed and submitted to the Faculty Office as soon as possible after the end of the placement.

10. Students are required to attend their practicals and clinics. Failure to do so without satisfactory explanation to the Head of the Department will be notified to the Registrar. A student whose attendance, after formal warning by the Registrar, continues to be unsatisfactory, may be debarred by the Academic Council from presenting for examination.

* A week is between 5 and 7 days, dependent on the normal working week of the practice/establishment.

Examination Subjects

			ECTS Credits
First University Examination in Veterinary Medicine			
VAN	1010	Veterinary Anatomy I (including Histology and Embryology)	30
VPB	1020	Veterinary Physiology and Biochemistry I (including Chemistry, Applied Biophysics and Molecular and Cell Biology)	30
Second University Examination in Veterinary Medicine			
VAN	2010	Veterinary Anatomy II (including Histology and Embryology)	18
AHP	2050	Animal Husbandry and Production	18
VPB	2020	Veterinary Physiology and Biochemistry II	18
VAN	2040	Applications and Integration (Problem Based Learning)	6
Third University Examination in Veterinary Medicine			
VMP	3010	Veterinary Microbiology	10
VMP	3020	Veterinary Parasitology	10
SACS	3050	Small Animal Clinical Studies I	10
LACS	3040	Large Animal Clinical Studies I	10
VSY	3070	Veterinary Surgery I	10
SACS	3060	Veterinary Pharmacology and Toxicology I	10
Fourth University Examination in Veterinary Medicine			
Old Curriculum			
VPY	4010	Veterinary Pathology	20
SACS	4020	Veterinary Pharmacology and Toxicology	20
LACS	4030	Large Animal Clinical Studies	20
New Curriculum			
LACS	4080	Large Animal Clinical Studies II	10
SACS	4050	Small Animal Clinical Studies II	10
VMP	4040	Veterinary Infectious Diseases	10
VPY	4090	Veterinary Pathology	10
VSY	4060	Veterinary Surgery II	10
LACS	4070	Veterinary Public Health and State Medicine	10
MVB Degree Examination			
SACS	5010	Small Animal Medicine	15
VSY	5020	Veterinary Surgery	15
LACS	5030	Large Animal Medicine	15
LACS	5040	Clinical Reproduction	15

Courses of Instruction for the Degree of MVB

First Year

Year Coordinator: Mr. George Hilton

AHP 2050 Animal Husbandry and Production
(Course Coordinator: *Dr. Eamonn Kelly*)

The course in Animal Husbandry and Production consists of a series of animal handling practicals carried out both at the Veterinary School and Lyons Research Farm to facilitate student learning of appropriate procedures to approach, handle, restrain and carry out routine chores on food producing, equine and companion animals. This material is examined in the latter part of the second year course.

VAN 1010 Veterinary Anatomy I (including Histology and Embryology)
(Course Coordinator: *Mr. George Hilton*)

The anatomy course relates the structure and development of mammalian body form to its function. The course is based around the comparative anatomy of the principal domestic species, and adopts a topographical and systematic approach. Gross anatomy practicals are based around the dissection of the dog, horse, and ruminant species. Examples of material from other species are also provided. Histology practicals cover the microscopic structure of cells and tissues. These are also structured around the major body systems. The course emphasises the anatomy of greatest clinical and pathological relevance. It includes examples of radiographic images, and brief examples of pathological conditions in which abnormalities of anatomy are found. In the first year, it comprises 3 modules:-

1. An introduction to basic anatomy (including embryology), cells, and tissues.
2. The comparative anatomy, development, and histology of the thorax and its related organs.
3. The comparative anatomy, development, and histology of the abdomen and pelvis and their related organs.

VPB 1020 Veterinary Physiology and Biochemistry I (including Chemistry, Applied Biophysics and Molecular and Cell Biology).
(Course Coordinator: *Dr. Jane Irwin*)

The course consists of eight lectures per week. Practicals include laboratory work, computer-aided learning, study group activity and tutorials for one period per week throughout the year.

The veterinary physiology and biochemistry course extends over two semesters, and provides a general introduction to physiological and biochemical processes, with emphasis on the physiology of domestic animals. A course in molecular and cell biology, including some genetics, is a component of this course and is integrated with veterinary anatomy. A course in veterinary applied biophysics is presented, comprising 24 hours of lectures and 6 hours of tutorials.

VAN 0000 Veterinary Information Technology and Computing
(Course Coordinator: *Mr. Eamonn Fitzpatrick*)

This course is jointly delivered by all of the pre-clinical departments with the assistance of the computing services. It is intended as a practical introduction to computing, information management, and the use of computers in presenting information. There will be seven sessions of 2 hours duration. The skills acquired in this course will be required for many aspects of learning and computer use throughout the undergraduate course.

VAN 2040 Applications and Integration (Problem Based Learning)
(Course Coordinator: *Dr. Deirdre Campion*)

This course involves the use of cases or problems on which students work in groups. Each problem stimulates small group discussion and student research on the basic and clinical sciences relevant to that problem. The problems require an inter-disciplinary approach and the students commence the process of applying and integrating their knowledge to solve them.

The first year examination marks will be carried forward to form part of an aggregate mark for this subject in second year.

LACS 3040 Veterinary Statistics
(Course Coordinator: Dr. Michelle Finlay, Department of Statistics)

The course in Statistics deals with the collection and analysis of data relevant to the epidemiological investigation of disease and the interpretation of biological data of veterinary relevance.

Second Year

Year Coordinator: Dr. Deirdre Campion

VAN 2010 Veterinary Anatomy II (including Histology and Embryology)
(Course Coordinator: *Dr. Michael Dore*)

The second year course in veterinary anatomy completes the regional approach to the study of comparative anatomy in domestic animals begun in first year. The comparative anatomy of the head is covered including its overall development and the development of particular structures within the head. The histology of these structures is also studied. This is followed by a course on the functional anatomy of the limbs with particular emphasis on athletic species. The second half of the second semester is devoted to courses on radiographic anatomy and imaging, and the anatomy of exotic animals. The latter is presented in a self-learning format with students carrying out projects under supervision, and exchanging information.

AHP 2050 Animal Husbandry and Production
(Course Coordinator: *Mr. Vivian Gath*)

This course consists of lectures, tutorials, laboratory and companion animal practical classes given at Ballsbridge and farm animal practicals, which take place at the University Research Farm at Lyons.

The aim of the course is to cover the basic components of animal husbandry and production and give the students current practical knowledge and recommendations on how to feed,

breed, house and manage farm and companion animals. In formal lectures and tutorials emphasis is placed on understanding the principals of genetics, nutrition, behaviour, reproduction, welfare and practical aspects of the husbandry of farm and companion animals. Alternative farming systems are also covered, as are economics and welfare implications of the management of all species. Laboratory sessions deal with the use of modern diagnostic techniques in genetics, nutrition, reproduction and dairy technology to help solve practical problems at farm level. Animal practicals involve identification of horses, assessing production systems, determination of reproductive status of farm animals, assessment of milking machine efficiency and investigating the behaviour, care and welfare of farm and companion animals. Visits are made to specific farms to help the student evaluate the efficiency of production systems, determine their strengths and weaknesses and make practical recommendations on how to improve efficiency.

VPB 2020 Veterinary Physiology and Biochemistry II

(Course Coordinator: *Dr. Deirdre Campion*)

The course will consist of four lectures per week in the first semester and three per week in the second semester. Practicals include laboratory work, computer-aided learning, study group activity and tutorials for one period per week throughout the year.

The basic material given during veterinary physiology and biochemistry I provides a foundation for veterinary physiology and biochemistry II. Students are expected to integrate their knowledge and understanding into their second and subsequent years. This course develops the systemic topics, which were introduced during the first year of the course. In the second semester, pharmacology is introduced, building on and complementing the physiological and biochemical knowledge gained in the previous three semesters.

VAN 2040 Applications and Integration (Problem Based Learning)

(Course Coordinator: *Dr. Deirdre Campion*)

This course is a continuation of the first year programme and uses clinical cases and problems on which students work in small groups.

LACS 0000 Physical Examination and History Taking

(Course Coordinator: *Professor J.D. Collins*)

This short course will introduce students to the principles underpinning professional veterinary conduct, clinical diagnosis based on history taking and clinical examination, and the recording and use of the veterinary medical record. Students will engage in exercises to equip them to accurately obtain and record a patient history and to conduct and record physical examinations of dogs, cats, horses and cattle using a problem based veterinary medical recording system. Particular attention is paid to the physical examination and examination of the bovine reproductive tract in teaching sessions on the UCD Lyons Estate Farm. A module in client-communication skills forms an integral component of the course.

Third Year

Year Coordinator: Dr. Nola Leonard

VMP 3010 Veterinary Microbiology

(Course Coordinator: *Dr. Nola Leonard*)

The course deals with micro-organisms pathogenic for animals, the diseases they produce and their public health significance. The course comprises lectures and practical classes.

The lecture course covers the following topics:

- General principles of veterinary bacteriology, mycology and virology.
- Infectious diseases of animals caused by bacteria, including chlamydiae and rickettsiae, mycoplasmas, fungi, viruses and prions.
- For each infectious disease, emphasis is placed on its aetiology, epidemiology, pathogenesis, clinical signs, diagnosis and control.
- Zoonotic diseases.

Students carry out practical procedures relevant to veterinary microbiology:

- *Bacteriology:* microscopy, culture, use of biochemical tests for identification, sterilization and disinfection, antibiotic susceptibility testing.
- *Mycology:* microscopy, culture, identification.
- *Virology:* electron microscopy, tissue culture, egg inoculation.
- *Immunology:* serological tests and their interpretation, vaccines and vaccination.

In the second semester the course deals with the infectious agents which cause diseases of the haemopoietic, cardiovascular, respiratory and central nervous systems, and the skin and mammary gland.

VMP 3020 Veterinary Parasitology

(Course Coordinator: *Dr. Grace Mulcahy*)

The aim of the course is to enable students to acquire an understanding of parasitic diseases of animals and their public health significance. Lectures, seminars and tutorials over two semesters deal with diseases caused by helminths, arthropods and protozoa.

- The epidemiology, together with pathogenesis, economic importance, diagnosis and control of parasitic diseases are presented.
- In practical classes, students carry out routine laboratory diagnostic techniques and learn to recognize parasites of clinical importance.
- In tutorials, small groups of students are encouraged to consider contemporary problems in parasitology and to discuss them in an independent and critical manner.
- Individual students are assigned a project on which they make a presentation to the seminar group.

In the second semester the course deals with the infectious agents which cause diseases of the haemopoietic, cardiovascular, respiratory and central nervous systems, and the skin.

VPY 4090 Veterinary Pathology I

(Course Coordinator: *Dr. Joseph Cassidy*)

This course encompasses general pathology in companion and farm animals. Lectures are supplemented by practical classes and demonstrations in gross, microscopic and clinical pathology. The course is designed to give the student a thorough understanding of disease mechanisms.

This course consists of lectures and tutorials in medicine of the different body systems with emphasis on pathophysiology, clinical signs of organ dysfunction, diagnostic methods, diagnosis and principles of treatment of diseases of companion animals (dogs, cats, birds and others).

An integrated course in systemic and clinical pathology is given over the two semesters of the third year. Lectures and laboratory practicals are supplemented by tutorials and demonstrations. Morphological and pathophysiological aspects of disease are related to clinical findings. The course is closely co-ordinated with the diagnostic service provided by the Department of Veterinary Pathology.

Practical instruction in laboratory medicine demonstrates clinical laboratory techniques applied to specimens submitted from animal patients. Results are interpreted and discussed.

In the second semester the course deals with the pathology of diseases of the haemopoietic, cardiovascular, respiratory and central nervous systems, the skin and the mammary gland.

SACS 3050 Small Animal Clinical Studies I

(Course Coordinator: *Mr. Ruaidhri Breathnach*)

This course consists of lectures and tutorials in medicine of the different body systems with emphasis on pathophysiology, clinical signs of organ dysfunction, diagnostic methods, diagnosis and principles of treatment of diseases of companion animals (dogs, cats, birds and others).

Body systems/topics covered include:

- Diseases of the haemopoietic system
- Diseases of the cardiovascular system
- Diseases of the respiratory system
- Diseases of the central nervous system
- Diseases of the skin and mammary gland.

LACS 3040 Large Animal Clinical Studies I

(Course Coordinator: *Dr. Kevin Dodd*)

The course in large animal clinical studies given in the third year consists of lectures, tutorials and practical classes on: (i) clinical methodology, hygiene and safety, (ii) veterinary epidemiology, (iii) clinical medicine including management of clinical cases.

Body systems/topics covered include:

- Diseases of the haemopoietic system
- Diseases of the cardiovascular system
- Diseases of the respiratory system
- Diseases of the central nervous system
- Diseases of the skin and mammary gland
- Toxicology
- Metabolic diseases

VSY 3070 Veterinary Surgery I

(Course Coordinators: *Professor Chris Bellenger and Mr. Luis Campoy*)

Lectures are given in the principles of surgery, introduction to diagnostic imaging and elements of systematic surgery in small and large animals. There is a series of practical classes in aseptic surgical technique.

Body systems/topics covered include:

- Diseases of the cardiovascular system
- Diseases of the respiratory system

SACS 3060 Veterinary Pharmacology and Toxicology I

(Course Coordinator: *Dr. Thomas Barragry*)

The course is designed to present those aspects of the various drugs sciences of most relevance to veterinary needs.

1. Systematic pharmacology deals with drugs according to the body system or function on which they have their greatest effect
2. Chemotherapeutics describes drugs used in the management of diseases of all types
3. Toxicology addresses the undesirable actions of drugs and other chemicals and describes the principles of treatment of poisoning.

Fourth Year

Year Coordinator: Mr. Micheál O'Mahony

Old Curriculum

VPY 4010 Veterinary Pathology II

(Course Coordinator: *Dr. Joseph Cassidy*)

An integrated course in systemic and clinical pathology is given over the three terms of the Fourth Year. Lectures and laboratory practicals are supplemented by tutorials and demonstrations. Morphological and pathophysiological aspects of disease are related to clinical findings. The course is closely co-ordinated with the diagnostic service provided by the Department of Veterinary Pathology.

Practical instruction in laboratory medicine demonstrates clinical laboratory techniques applied to specimens submitted from animal patients. Results are interpreted and discussed.

VMP 0000 Veterinary Microbiology II

(Course Coordinator: *Dr. Bryan Markey*)

This course deals with the laboratory diagnosis and some applied aspects of the treatment, prevention and control of bacterial, mycotic, viral and prion diseases of domesticated animals.

VMP 0000 Veterinary Parasitology II

(Course Coordinator: *Dr. Bryan Markey*)

This course deals with the laboratory diagnosis and some applied aspects of the treatment, control and prevention of parasitic diseases in domesticated animals.

SACS 4020 Veterinary Pharmacology and Toxicology

(Course Coordinator: *Dr. David Brayden*)

The course is designed to present those aspects of the various drugs sciences of most relevance to veterinary needs. It is presented in the following sequence via lectures, seminars, tutorial demonstrations and practical sessions.

1. The basic pharmacology of how drugs act, how their actions are measured, how they reach their sites of action and how they are regulated by law.
2. Systematic pharmacology deals with drugs according to the body system or function on which they have their greatest effect.
3. Chemotherapeutics describes drugs used in the management of infectious diseases of all types.
4. Toxicology addresses the undesirable actions of drugs and other chemicals and describes the treatment of poisoning.

LACS 4030 Large Animal Clinical Studies I

(Course Coordinator: *Dr. Lindy Vaughan*)

The course in Large Animal Clinical Studies given in the Fourth Year consists of lectures, tutorials and practical classes on: (i) clinical methodology, (ii) clinical reproduction, (iii) poultry medicine, (iv) food hygiene and safety, (v) veterinary public health, and (vi) epidemiology and population medicine.

Students attend practical clinical reproduction sessions on the UCD Lyons Estate Research Farm. Clinical training is also provided on co-operating farms where disease problems are investigated both as individual cases and as herd or flock problems. Supervised visits are made to premises engaged in the production of foods of animal origin.

SACS 5010 Small Animal Clinical Studies I

(Course Coordinator: *Mr. Ruaidhri Breathnach*)

This course consists of lectures and tutorials in medicine of the different body systems with emphasis on pathophysiology, clinical signs of organ dysfunction, diagnostic methods, diagnosis and principles of treatment of diseases of companion animals (dogs, cats, birds and others). Lectures are also given in clinical nutrition, infectious diseases and behaviour.

VSY 5020 Veterinary Surgery I

(Course Coordinator: *Dr. James Schumacher and Ms. Sue Rackard*)

Lectures are given in the principles of surgery, introduction to veterinary anaesthesia, introduction to diagnostic imaging and elements of systematic surgery in small and large animals. There are seminars in anaesthesia and radiology and a series of clinical presentations. There is a series of practical classes in aseptic surgical technique.

Clinical instruction is given in the clinic and hospital. In the Fourth and Fifth Year, students are on rota to attend the clinic and hospital at weekends during term.

New Curriculum

LACS 4080 Large Animal Clinical Studies II

(Course Coordinator: *Dr. Lindy Vaughan)*

The fourth year lecture course in large animal clinical studies is aligned with the systems based approach dealing with epidemiology and medicine of gastrointestinal and urinary tracts, musculoskeletal, endocrine and reproductive systems. Special specific modules deal with veterinary involvement in the pig and poultry industries as well as ruminant herd/flock health programmes. The clinical reproduction course involves lectures on obstetrics and reproduction in all species. Students receive practical tuition in the University Veterinary Hospital and the Lyons Estate Research Farm.

SACS 4050 Small Animal Clinical Studies II

(Course Coordinator: *Mr. Ruaidhri Breathnach*)

This course consists of lectures and tutorials in medicine of the different body systems with emphasis on pathophysiology, clinical signs of organ dysfunction, diagnostic methods, diagnosis and principles of treatment of diseases of companion animals (dogs, cats, rabbits, birds and other exotics). The body systems covered will include the gastrointestinal and urinary tracts, musculoskeletal and endocrine systems and special senses. Lectures are also given in clinical nutrition, infectious diseases and behaviour.

SACS 0000 Veterinary Pharmacology and Toxicology II

(Course Coordinator: *Dr. David Brayden)*

The pharmacology and toxicology course will consist of lectures and tutorials linked to selected body system topics. Prominent lecture groupings comprise anaesthetic drugs, and the urinary and gastrointestinal tracts as well as drug use in production animals relating to

public health. Amongst the topics addressed in tutorials are neurotransmission at ganglia and effector organs, the drug regulatory process, veterinary autonomic pharmacology and practical applications of anaesthesia. This course will be examined in the areas in which it is taught.

VMP 4040 Veterinary Infectious Diseases

(Course Coordinator: *Dr. Bryan Markey)*

The course builds on the veterinary microbiology and veterinary parasitology courses presented in the third year. It deals with applied aspects of infectious diseases, in particular the pathogenesis, laboratory diagnosis and applied aspects of the prevention and control of parasitic bacterial mycotic viral and prion diseases of domesticated animals. Lectures, practical classes, tutorials and problem based learning sessions over two semesters deal with veterinary public health and the infectious agents which cause diseases of the gastrointestinal tract, urogenital tract, musculoskeletal system and organs of special sense.

VSY 4060 Veterinary Surgery II

(Course Coordinators: *Dr. James Schumacher and Ms. Sue Rackard*)

This course will mainly consist of contributions in small and large animal surgery, anaesthesia and intensive care and diagnostic imaging to the body system courses. Other topics include surgery of the special senses, oncological surgery and surgery of exotic animals. Lectures are supplemented by practical classes in gastrointestional surgery and operative surgery of equine, bovine and canine cadavers, seminars and tutorials in anaesthesia, diagnostic imaging, bandaging in large and small animals and lameness examination in horses, Students attend clinical case presentations by final year students. Students are on rota to attend to hospitalised animals at weekends during the term.

LACS 4070 Veterinary Public Health and Food Hygiene

(Course Coordinator: *Mr. Micheál O'Mahony)*

Veterinary public health and food hygiene deals with the interaction of animal health and the wider environment, particular to human health. The course builds new skills and knowledge onto prior training in order to prepare students for roles in food safety assurance. The lecture course initially describes relevant microbiological, parasitological, pharmaceutical and environmental hazards in alignment with related disciplines. It then details the approach of veterinary public health to managing these risks followed by consideration of veterinary input to safety assurance at pre-harvest, harvest and post-harvest cases of the production of foods of animal origin. Practical classes deal with organoleptic, microbiological and biochemical appraisal of food while tutorial classes provide in-dept instruction and practical exercises. Off-site visits to food production establishments also take place.

VPY 4090 Veterinary Pathology II

(Course Coordinator: *Dr. Joseph Cassidy)*

A systems based course in morphological and clinical pathology is taught in an integrated fashion with related disciplines. The course spans three terms and consists of lectures, laboratory practicals, small group tutorials and demonstrations of post mortem material. Systems taught include the gastrointestinal, urinary, reproductive, musculoskeletal, endocrine and the special senses. Morphological and pathophysiological aspects of disease are related to clinical findings. Teaching material is generated by the diagnostic service provided to the University Veterinary Hospital and to external veterinary practices.

Fifth Year

Year Coordinator: Ms. Anne Healy

SACS 5010 Small Animal Clinical Studies II

(Course Coordinator: *Mr. Ruaidhri Breathnach*)

The lectures in the second year of Small Animal Clinical Studies consist of problem orientated lectures in small animal medicine. In addition, there are lectures in clinical nutrition, oncology, toxicology, geriatric and paediatric medicine. Students are supervised in small groups in the clinic and hospital where they have responsibility for the care and welfare of hospital patients. Students are rostered for out-of-hours and emergency care during term time.

LACS 5030 Large Animal Clinical Studies II

(Course Coordinator: *Ms. Anne Healy)*

Lectures, tutorials and practicals are given on (i) the diagnosis, treatment and prevention of diseases of cattle, sheep, horses, pigs, goats and deer; (ii) clinical reproduction in all species of domestic animals; (iii) herd and flock medicine; (iv) state medicine; (v) jurisprudence and ethics; and (vi) practice management. There are daily clinical sessions which students attend on a rota basis in small groups for instruction in the diagnosis, treatment and prevention of diseases in large animals. Clinical teaching takes place in the University Veterinary Hospital where emphasis is placed on examination of the individual animal. Teaching of herd health is performed on farms with the support of cooperating large animal veterinary practices.

VSY 5020 Veterinary Surgery II

(Course Coordinators: *Mr. Mark Glyde and Ms. Cliona Skelly*)

The course of lectures covers all the body systems in small and large animals and diagnostic imaging and veterinary anaesthesia. Teaching in case management, aseptic technique and operating room procedure, diagnostic imaging and veterinary anaesthesia is given within the University Veterinary Hospital where students assist on rotation in veterinary anaesthesia, veterinary diagnostic imaging, large animal surgery and small animal surgery. Training is supplemented by seminars and practical classes. Rostered patient care before and after classes and on weekends forms part of the learning experience.

Postgraduate Degrees

Degree of Master of Animal Science

Degree of Master of Science

Degree of Master of Veterinary Medicine

Degree of Doctor of Philosophy

Postgraduate Study and Research

Candidates for the degrees of MAnSc, MSc, MVM, PhD shall fulfil the University regulations and requirements regarding these degrees.

Application Procedure
The application of a candidate shall be submitted for approval, through the Dean, to the Faculty of Veterinary Medicine, by the Professor or full-time statutory academic staff member with the approval of the relevant Professor, under whose direction the student is to work.

The application shall be submitted in writing to the Dean and shall be circulated to the Research Committee prior to a meeting of the Faculty at which the application is presented for acceptance. The application shall provide information regarding:

(a) The candidate's academic qualifications and fitness to undertake postgraduate studies;

(b) The proposed research project and course of study;

(c) The availability of facilities for the proposed research;

(d) The name(s) of the supervisor(s).

Candidates from outside Ireland and Great Britain will be required to provide evidence of a satisfactory standard in English.

The names of the proposed extern examiners shall be submitted in writing to the Dean and shall be circulated, in advance, to the Faculty prior to the meeting at which the names are presented.

Degree of Master of Animal Science (MAnSc)

Admission Requirements
A candidate for the MAnSc degree, in the Faculty of Veterinary Medicine, would normally be a holder of a primary degree with First or Second Class Honours in a subject of relevance to veterinary medicine and shall present such evidence in this regard as will satisfy the Faculty.

Course Regulations
Candidates shall carry on research for a minimum period of three terms and shall take such courses as may be prescribed by the Faculty. Nine terms are allowed in which to complete the degree from the date of acceptance. Candidates who have not completed the degree within that period must re-apply to the Faculty. Candidates shall be required to take an oral examination on the subject matter of their thesis unless exempted by the examiners.

Degree of Master of Science (MSc)

Admission Requirements
A candidate for the MSc degree must have at least a Second Class Honours primary degree or equivalent.

Course Regulations
The degree of Master of Science may be awarded by thesis. Candidates shall carry out research for a minimum period of three terms. Nine terms are allowed in which to complete the degree from the date of acceptance. Candidates may be required to pass an examination on the subject matter of the thesis if the examiners so decide.

Degree of Master of Veterinary Medicine (MVM)

Admission Requirements
Holders of a degree in veterinary medicine, registerable with the Veterinary Council, shall be eligible to obtain the Degree of Master of Veterinary Medicine (MVM). The Faculty may, at its discretion, recommend that the holder of a degree in Veterinary Medicine, not registerable with the Veterinary Council, be deemed eligible to obtain the Degree of MVM.

Course Regulations
Candidates for the MVM degree shall carry on research for a minimum period of three terms. Nine terms are allowed in which to complete the degree from the date of acceptance. Candidates who have not completed the degree within that period must re-apply to the Faculty. Candidates shall be required to take an oral examination on the subject matter of their thesis unless exempted by the examiners.

Degree of Doctor of Philosophy (PhD)

A candidate for the PhD degree in the Faculty of Veterinary Medicine shall possess a degree in veterinary medicine or other appropriate qualification and shall present such evidence in this regard as will satisfy the Faculty.

Candidates shall carry on research for a minimum period of nine terms or six terms in the case of any candidate whose attainments, in the opinion of the Faculty, justify such shorter course.

Candidates are allowed six years in which to complete the degree from the date of acceptance, and if they have not done so within that period, they must re-apply to the Faculty.

Candidates shall be required to take an oral examination on the subject matter of their thesis unless exempted by the examiners.

Diploma

Diploma in Veterinary Nursing (DipVN)

In response to the enthusiastic interest and support of the veterinary profession and veterinary nurses in Ireland, UCD and the Faculty of Veterinary Medicine have developed a Diploma in Veterinary Nursing.

The three-year course is based on the block release principle. Trainees are required to hold a minimum of 20 hours paid continuous employment, in a UCD Faculty of Veterinary Medicine-registered veterinary practice. This employment must be arranged prior to application and should start no later than the date of registration with UCD. While working in practice, trainees will complete a comprehensive personal portfolio, illustrating the skills and knowledge they are acquiring on the job.

Each year, the trainee will spend eight weeks at the Faculty of Veterinary Medicine, receiving an intensive course of lectures, practical classes and clinical rotations. The University Veterinary Hospital caters for both large and small animals, and the curriculum will incorporate small animal, farm animal and equine nursing.

Admission Requirements
Passes in six recognised subjects at Leaving Certificate, at least two of which must be grade C3 on a higher paper or better. Subjects must include: Irish (minimum grade D3 leaving certificate ordinary paper); English (minimum grade C3 leaving certificate ordinary paper); Mathematics (minimum grade C3 leaving certificate ordinary paper); Laboratory Science subject or Home Economics (Social & Scientific) (minimum grade C3 leaving certificate higher paper) and two other subjects.

Up to ten places per year will be available for persons who have completed alternative training and/or experience, but who may not have secured all the Leaving Certificate entry requirements. This entry route will be open to persons aged twenty-three years or over on the 1st January prior to entry.

Applications should be made direct to the UCD Admissions Office. In 2003 there will be a total of thirty places.

Examination Subjects

		ECTS Credits
First University Examination in Veterinary Nursing		
VNUR 1001	Veterinary Nursing Theory and Practice IA	12
VNUR 1002	Veterinary Nursing Theory and Practice IB	12
VNUR 1003	Veterinary Nursing Theory and Practice I	6
VNUR 1004	Portfolio of Veterinary Nursing Experience	18
VNUR 1005	Clinical Veterinary Nursing Rotations	12
Second University Examination in Veterinary Nursing		
VNUR 2001	Veterinary Nursing Theory and Practice IIA	12
VNUR 2002	Veterinary Nursing Theory and Practice IIB	12
VNUR 2003	Veterinary Nursing Theory and Practice II	6
VNUR 2004	Portfolio of Veterinary Nursing Experience	18
VNUR 2005	Clinical Veterinary Nursing Rotations	12
Third University Examination in Veterinary Nursing		
VNUR 3001	Veterinary Nursing Theory and Practice IIIA	12
VNUR 3002	Veterinary Nursing Theory and Practice IIIB	12
VNUR 3003	Veterinary Nursing Theory and Practice III	6
VNUR 3004	Portfolio of Veterinary Nursing Experience	18
VNUR 3005	Clinical Veterinary Nursing Rotations	12

Scholarships and Prizes Awarded

Undergraduate Scholarships

University College Dublin awards one scholarship of €635 on each of the first, second, third and fourth university examination in veterinary medicine.

Postgraduate Scholarships

University College Dublin awards approximately thirty postgraduate scholarships to students undertaking higher degrees by major thesis. The number available for the Faculty of Veterinary Medicine is two *(See Student Awards booklet for application procedure).*

Scholarships, Prizes and Medals from Trust Funds and Other Sources

Alexandra Colquhoun Scholarship in Veterinary Medicine
A scholarship, of the annual value of €4,444 approximately, has been established by bequest to the University. The scholarship is intended to enable the holder to pursue the degree course in Veterinary Medicine under the following conditions as laid down by the will of the donor:

1. The candidate must be a female student.
2. The candidate must be an Irish citizen resident in the Republic of Ireland, whose parents also were citizens of the Republic of Ireland at the time of her birth.
3. The candidate must be a person who, without the benefit of the scholarship, would be unable to afford to pursue courses at the University to enable her to qualify as a veterinary surgeon.

John Freeman Memorial Medal
This medal is awarded at graduation to the candidate who, at his/her first sitting at the University Examinations in Veterinary Medicine, acquires the highest aggregate marks in the following subjects: Animal Husbandry and Production, Microbiology, Parasitology, Pathology and Pharmacology.

John Hannan Medal
This medal is in recognition of the contribution to Veterinary Public Health made by Professor John Hannan, former Dean of the Faculty of Veterinary Medicine, University College, Dublin (1984-1990). Professor Hannan played a leading role in the development and promotion of Veterinary Public Health and was a leading proponent of the discipline at national and international level. He was a member of the inaugural Board of the Food Safety Authority of Ireland, Vice-President of the World Association of Veterinary Food Hygienists and was a Consultant in Food Hygiene to the World Health Organisation. He served on numerous other consultative bodies on veterinary education and related matters.

The John Hannan Medal is awarded annually to the student who, having passed the relevant University Examination, obtained the overall highest marks in Veterinary Public Health and Food Hygiene.

Thomas Henry Foundation

This trust provides financial assistance in the Sciences and practice of Agriculture, Horticulture and Veterinary Medicine to persons born, or ordinarily resident, in Northern Ireland.

In the case of postgraduate students undertaking research in the designated areas, application is made by the University on behalf of a student. A detailed proposal of the research project to be undertaken must be submitted.

In the case of undergraduate students, who must have been born or be ordinarily resident in Northern Ireland, application may be made directly to the trust before 1st July in any year to: The Secretary, Thomas Henry Foundation, 31, The Terrace, Downpatrick, Co. Down BT30 6EH, Northern Ireland.

Scholarships are awarded by the Foundation on a competitive basis.

Centenary Medal (IVA)

This medal is awarded at graduation to the candidate with the most consistently high marks throughout the course.

Professor P.A. McGeady Memorial Medal in Veterinary Surgery

This medal is in memory of Professor P.A. McGeady, Dean of the UCD Faculty of Veterinary Medicine from 1960 to 1972 and Professor of Veterinary Surgery, Obstetrics and Infertility from 1946 until his retirement in 1976. His family have established this medal as a tribute to Professor McGeady's contribution to the discipline of Veterinary Surgery at UCD, his skills in teaching and his involvement in veterinary education during a period of considerable change.

The medal is awarded annually to the candidate who obtains the highest overall mark in the professional examinations in Veterinary Surgery.

Mullaney Award in Veterinary Microbiology

This award was established by Mrs. R. Mullaney, Lecturer in Veterinary Virology (1961-1987), on her retirement from University College Dublin.

The award will take the form of a prize to be presented annually to the student obtaining the highest marks in the subject Veterinary Microbiology in the Third Veterinary Examination. The general conditions governing University awards will apply *(see Student Awards booklet).*

David O'Connor Memorial Medal - Sportsperson of the Year

This medal was established in memory of David O'Connor, a 1994 Veterinary Medicine honours graduate. David was actively involved with Gaelic football, soccer and rugby at club and university level. His enthusiasm, commitment and legendary management skills are some of the qualities this award aims to commemorate. A medal (and bursary) will be presented annually to a student in the Faculty of Veterinary Medicine who has significant success in sport.

Individual veterinary students or, in exceptional circumstances, teams may be nominated by students, staff or sports managers within UCD. Nominations must be made to the Office of the Dean of Veterinary Medicine before the Easter break each year.

A selection committee will make a decision on the recipient of the medal and it will be presented to the winner in May of each year.

Pharmacia Upjohn Travel Grant

This award will be made to the student who obtains first place in the Final MVB Degree Examination (Student of the Year Award). The travel grant, of the value of €635 is payable to enable the candidate to observe, at first hand, veterinary and research institutions outside of Ireland. The travel itinerary is agreed by the Dean, the sponsor and the successful student.

Training Scholarships for Undergraduate Students

These scholarships which amount to €1,250 - €2,000 each to cover travel and subsistence expenses are awarded annually to second, third and fourth year veterinary students, on the recommendation of an Assessment Committee based on an interview and the candidates' performance in their courses. The scholarships are designed to allow the successful students to work in renowned research laboratories where they can actively engage in some innovative investigation of interest to the livestock and other related industries. They are normally awarded to cover work done during the summer vacation.

Two scholarships are available, one donated by the Veterinary Council Education Trust Fund and one by Intervet (Ireland) Limited.

Wellcome Studentship

Each year the Animal Diseases Research Association (Moredun Research Institute) seeks funds (approximately €889 per student) from the Wellcome Trust to enable selected veterinary students to carry out supervised research projects over eight weeks of the summer vacation. Third and higher year students are eligible to apply to the Selection Committee for these awards.

Moredun Foundation Prize

This prize is awarded to the final year student who performs best in the area of farm animal studies. The award consists of a personalised certificate; a copy of the diseases of sheep book signed by the editors, Professor Ian Aitken and Dr. Bill Martin; a complete back catalogue of the technical animal health news sheets produced by the foundation and a year's free membership of the Moredun Foundation.

Ferranti Scholarships

In late 1997 Mr. Philip Ferranti MEd, of Palm Desert, California, USA, decided to support two students to undertake projects of special interest to them with a contribution of approximately US$3,000. These scholarships are available to third and fourth year students (divided between male and female students). In December of each year students are notified regarding these scholarships and those applying are requested to submit a proposal on how they would use the scholarship to further their extra-mural experience and how this experience would enhance the achievement of their career goals. The proposals should not exceed 500 works in length. The Dean's Selection Committee considers the proposals submitted and makes the awards. Copies of the proposals of the award-winning students are

sent to Mr. Ferranti together with a photograph of the student and a final report is sent at the end of the project.

Alameda East Veterinary Hospital

Dr. Kevin T. Fitzgerald, PhD, DVM, Diplomate ABVP (Canine/Feline) together with the other partners of Alameda East Veterinary Hospital, Denver, Colorado, USA offer a place to one fourth year student for three-four weeks in the Summer. This is a 22-man practice with 13 general practitioners, 9 board certified specialists in surgery, internal medicine, radiology, neurology, dermatology and general practice. The hospital is open twenty-four hours a day, 365 days a year and sees hundreds of emergencies each month. This hospital has also featured on television cable channel “Animal Planet”. The practice will provide the student with travel from Ireland and accommodation while at the hospital.