WESTERN COLLEGE OF VETERINARY MEDICINE

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* Denotes non-members of faculty

GENERAL INFORMATION

BACKGROUND OF THE WESTERN COLLEGE OF VETERINARY MEDICINE

The decision to build a College of Veterinary Medicine in Western Canada on the campus of the University of Saskatchewan at Saskatoon was reached on August 23, 1963. Representatives of the universities and governments of the four western provinces and the federal government were involved in the discussions leading up to the decision. This co-operative regional approach to higher education is maintained through participation of regional representatives in the Advisory Council of the College. The Council provides formal communication on regional needs between the several western provinces and the college.

The Western College of Veterinary Medicine meets its responsibilities in three major areas; education, research, and service.

Education, the primary function, embraces undergraduate teaching in veterinary medicine and related disciplines. Formal graduate study toward M.Sc. or Ph.D. degrees or diplomas, and residency training programs are becoming increasingly important. Additionally, as in many fields, rapid advances in knowledge and techniques necessitate continuing education programs for the graduate veterinarian; this is a recently recognized addition to the educational function of universities.

Research supports the teaching program and at the same time exploits the potential

of the highly trained staff. Research contributes to the advancement of science and the solving of health problems of man and animals.

A variety of services are provided, which aid the practicing veterinarian and thus ultimately the animal owner while yielding necessary teaching material and practical experience for students. These include a veterinary farm practice, clinics, laboratory diagnostic and extension services.

PHYSICAL FACILITIES

The University of Saskatchewan proceeded rapidly with the establishment of the new college. The initial building was completed in September 1965 in time to provide temporary teaching facilities for the first class, which entered that fall. Construction of the first stage of the main building began in 1966, and occupancy and official dedication occurred in 1969. A major expansion of these facilities was completed in late 1981.

The main building is arranged about a central core in which are found those facilities which are in general usage by all divisions of the veterinary college, i.e. lecture rooms, college administrative offices and library. About this central core are arranged the specialized areas for the academic departments of the college. In these areas are found the teaching laboratories designed for specific disciplines, research laboratories for members of the faculty and graduate students, and the service facilities associated with each department.

The large animal hospital and the small animal hospital in the college provide patients for the teaching of clinical medicine, while the ambulatory clinic acquaints the student with veterinary farm practice. These clinical units, together with the supporting service laboratory units, comprise the Veterinary Teaching Hospital.

THE VETERINARY LIBRARY

The Veterinary Library was established as a major branch of the University Library System just prior to the entrance of the first class of veterinary students. Its primary responsibility, that of support to the teaching program, has been broadened to include creation of a central repository for western Canada of reference material pertinent to animal medicine. In addition to support from the University, its initial growth has been aided by donations from individuals, professional associations and industrial organizations.

The library features a large reading room with adjacent alcoves for reference books, current periodical display and microfilm. On a mezzanine level surrounding the reading area, extensive stack space for periodical storage and a number of study carrels are located. The library receives all major veterinary periodicals and many journals related to basic biological or medical sciences. The presence of a library devoted to health sciences associated with the Colleges of Medicine and Dentistry on the campus provides additional depth of library support.

THE VETERINARY PROFESSION

Members of the profession of Veterinary Medicine are primarily responsible for the health of farm livestock and poultry, and pet animals. These are the major concerns of most veterinarians in private practice and for a large number of those in governmental service. However, the opportunities available to the graduate veterinarian to utilize his or her training in a number of other related areas are increasing rapidly. These opportunities include participation in various phases of public health work, such as inspection of production, storage and distribution of animal food products. Many graduates specialize in the health care of zoo animals, of wild animals (including birds and other lower vertebrates) or of animals used for biological and medical research. In addition, veterinarians in increasing numbers are engaged in full time research related either to animal disease or to more general biological or medical problems.

It is the aim of the Western College of Veterinary Medicine to provide the student with a good knowledge of the basic pre-clinical sciences and with practical training in clinical Veterinary Medicine. Graduates should be capable of successfully entering practice or training for a specialty in other fields of Veterinary Medicine.

ADMISSION REQUIREMENTS

PRE-VETERINARY PROGRAM

Admission to the Western College of Veterinary Medicine requires at least two full years (60 credit units) in the College of Arts and Science or the College of Agriculture. The pre-veterinary requirements are as follows:

(1) English or Literature 6 credit units*
(2) Chemistry 6 credit units
(3) Organic Chemistry 3 credit units
(4) Biochemistry 6 credit units
(5) Physics 6 credit units
(6) Mathematics or Statistics 6 credit units
(7) Biology 6 credit units
(8) Genetics 3 credit units
(9) Introductory Microbiology 3 credit units
(10) Electives** 15 credit units

Total 60 credit units

All courses must be beyond senior matriculation (Grade 12 or equivalent) level***

The Faculty of the Western College of Veterinary Medicine has also approved a policy that requires all applicants to have a minimum cumulative average of 70% in order to be considered for admission into the veterinary program. All grades are converted to a common scale for comparative purposes and this converted average will be used.

* One credit unit represents one lecture-hour equivalent per week for one term, i.e. approximately one semester hour of credit.

** The choice of electives should be based upon the requirements of the program in which the student is enrolled. At some universities it might be in the student's better interest to take three years to meet the pre-veterinary requirements in order to take electives appropriate for this program. Students are also encouraged to select electives which will broaden their perspective. A course in statistics is desirable and may be used to meet a part of the mathematics requirement.

*** One University course (6 credit units) not requiring a Grade 12 subject as prerequisite may be counted as one of the electives if it is needed to meet a senior matriculation deficiency.

At the University of Saskatchewan, pre-veterinary course requirements are usually met by the following courses:

- ENG 110.6 *or* any two of 111.3, 112.3, 113.3, 114.3
- CHEM 111.3, 251.3 and 3 additional credits units of a 200-level chemistry (or BIOCH 212.3)
- MATH 101.3 and STATS 103.3 *or* 110.3 and 3 additional credits units in mathematics or statistics
- PHYS 111.6
- BIOL 110.6 and 211.3
- BIOCH 200.3 and 211.3
- AP MC 212.3 or MICRO 214.3
- Sufficient electives to meet the 15 credit requirement.

It is the applicant's responsibility to ensure that his or her pre-veterinary courses are acceptable as prerequisite courses for admission to the D.V.M. program. Ordinarily, pre-veterinary advisors at other universities know the appropriate pre-veterinary courses in their institutions.

Only a limited number of applicants can be accepted for admission to the first year of the Veterinary Medicine program and completion of the pre-veterinary program carries no assurance of admission to the professional program.

Since competition for admission to this College is very keen, it is recommended that the applicant choose an alternate career goal which will determine the choice of electives taken. Applicants are urged to consult their undergraduate advisors for help in this regard.

Enquiries and requests for application forms should be directed to the Associate Dean (Academic), Western College of Veterinary Medicine, University of Saskatchewan. Completed applications for admission must be returned before January 3, 2001.

Selection will be based on scholastic records, references, interviews, and general qualifications. While practical experience with animals is not an absolute requirement for admission to the program, it is becoming increasingly important as a factor in selection, as is an exposure to veterinary medicine.

Since the Western College of Veterinary Medicine is a regional institution, it admits applicants primarily from western Canada with quotas for each province. For detailed information on residency policy and admissions procedures, contact the Admissions Office, Western College of Veterinary Medicine for a copy of the Admissions brochure.

ADMISSION OF ABORIGINAL APPLICANTS

The Western College of Veterinary Medicine has recently, with the approval of the Saskatchewan Human Rights Commission, introduced an Educational Equity Program for Aboriginal Students. In this program, a defined number of seats have been allocated for self-identified applicants of Aboriginal descent. These applicants will be ranked among themselves and not against the general applicant pool.

Proof of Aboriginal ancestry will be required and must be provided at the time of application. For the purpose of admission, the documents that are accepted as proof of Aboriginal ancestry are listed in the General Information section of the *Calendar.*

If you wish to be considered under this program, please enclose a letter of intent with your completed application form as well as proof of ancestry.

GRADUATE STUDY

A student who has graduated with a degree in Veterinary Medicine or who has a four-year Honours degree and who has obtained a sufficiently high standing may seek admission to the College of Graduate Studies and Research to proceed with a graduate program. For details of graduate programs offered, see the College of Graduate Studies and Research section of the *Calendar* or consult the Associate Dean, Research, Western College of Veterinary Medicine.

REGISTRATION AND ATTENDANCE

Lectures for students of Veterinary Medicine will begin on Monday, August 28, 2000.

Students wishing to register late should address the request, together with a statement of the special circumstances, to the Dean, Western College of Veterinary Medicine, University of Saskatchewan. Late registration will be permitted only by special ruling of the Faculty.

Students are expected to attend regularly all lectures and laboratory periods. Failure of a student to perform the work of the course to the satisfaction of the Faculty will involve the loss of credit for the course and the student will be excluded from the final examination.

DOCTOR OF VETERINARY MEDICINE PROGRAM

The session consists of four quarters of eight weeks each.

First Quarter
August 28 - October 22, 2000

Second Quarter
October 23 - December 15, 2000
(Years 1, 2, 3)

October 23 - December 17, 2000
(Year 4)

Third Quarter
January 3 - February 25, 2001

Mid-term Break
February 26 - March 4, 2001
(All Years)

Fourth Quarter
March 5 - April 20, 2001
(Years 1, 2, 3)

March 5 - April 29, 2001
(Year 4)
Examination periods follow the Second and Fourth Quarter termination dates.

COURSES OF INSTRUCTION

First Year

Gross Anatomy, Developmental Anatomy, Microscopic Anatomy, Physiology I, Epidemiology, Animal Management and Production I, Survey of Veterinary Medicine, Biochemistry, Neuroscience, Immunology.

Second Year

Animal Management and Production II, Veterinary Bacteriology and Mycology, Physiology II, Pharmacology, Virology, Parasitology, Systemic Pathology, Immunology, General Internal Veterinary Medicine, Radiology, Veterinary Anesthesiology/Surgical Principles, General Pathology.

Third Year

Clinical Pathology, Obstetrics and Reproduction, Avian and Laboratory Animal Medicine, Food Hygiene, Toxicology, Clinical Pharmacology, Herd Medicine, The Veterinarian and the Law, Surgical and Medical Exercises, Small and Large Animal Internal Medicine, Small and Large Animal Surgery, Clinics.

Fourth Year

Applied Veterinary Medicine (Clinics).

PROMOTION REGULATIONS

Progress through the program is determined on a yearly basis with promotion to the next year or recommendation for graduation requiring a sessional weighted average of 60% and successful completion of all non-elective courses.

Subject to the regulations following, a student who has failed in any course of the veterinary medical program receiving a grade of less than 50% will be required to write and pass a supplemental examination before starting studies in a subsequent year.

Subject to a special ruling by the Faculty, failure in two courses or failure to obtain a weighted average of 60% constitutes failure for the session. The student may be permitted to repeat the entire year or be required to discontinue at the discretion of the Faculty. A student repeating a year must obtain a minimum grade of 60% in each course.

The Faculty may require an individual to withdraw from the program for reasons other than academic if it is considered in the best interests of the individual or the College.

See the General Information section of the *Calendar* for a full explanation of the grading system and the literal descriptors associated with percentage scores.

DEGREES

The D.V.M. degree with Distinction will be awarded to students whose four-year averages are between .70 and 1.5 standard deviations above the mean of the four-year averages for their class and who have four-year averages of greater than 75.0% and weighted averages of greater than 70.0% in Year 4. The D.V.M. degree with Great Distinction will be awarded to students whose four-year averages are more than 1.5 standard deviations above the mean of the four-year averages for their class and who have four-year averages of greater than 80.0% and weighted averages of greater than 75.0% in Year 4.

REQUIREMENTS FOR LICENSE TO PRACTICE

A D.V.M. degree does not automatically confer the right to practice veterinary medicine. By legislation this right is the prerogative of the recognized veterinary associations in each of the provinces. Further information on provincial licenses is obtainable from the offices of the provincial veterinary associations.

FEES, PAYMENT OF FEES, CANCELLATIONS AND REFUNDS, AND COURSE CHANGES

See the General Information section of the *Calendar.*

SPECIAL EXPENDITURES

Each student, on registering for the first year in Veterinary Medicine, must purchase a suitable microscope.

Instruments will be required for anatomy dissection and clinical work. Department heads concerned will advise on types or models preferred.

SCHOLARSHIPS

Scholarships which are open for competition to students of all colleges are listed in the *Awards Guides* available from the Office of the Registrar, University of Saskatchewan.

COURSE DESCRIPTIONS

** Denotes courses designed for students other than those in the Western College of Veterinary Medicine.*

See the General Information section of the *Calendar* for an explanation of the format used in course descriptions.

BIOCHEMISTRY

BIOCH 207.2
Veterinary Biochemistry
Q1&2(2L-2P)

Prerequisite(s): BIOCH 200 and 211 (or 203) or equivalent.

Selected biochemical topics with special relevance to function at the level of the whole organism will be presented. The emphasis will be placed on comparative metabolic aspects of the major food and companion animal species, especially those metabolic differences which occur that are related to performance, productive capacity, and disease processes.

HERD MEDICINE AND THERIOGENOLOGY

HMT 200.5
Animal Management and Production I
Q1,2&3(2L-2P)

Offered jointly with the Department of Animal Science.

Provides a basic foundation of knowledge in the behaviour, husbandry, nutrition and breeding of the common animal species, featuring the veterinary aspects of the various animal industries and the contemporary role of the veterinarian in servicing them. Concepts of herd management, health and production interactions, and the makeup of various animal industries will be emphasized for the various species groups.

Laboratory exercises will emphasize hands-on experience in animal handling and field trips to production facilities. Laboratories will also involve production data analysis, feed evaluations, and exercises relating to genetics of animal breeding.

HMT 300.5
Animal Management and Production II
Q1,2,3&4(2L-2P)

Offered jointly with the Department of Animal Science.

A continuation of Animal Management and Production I.

HMT 400.2
Herd Medicine
Q3(2L-2P),Q4(2L)

Covers how the concepts of herd or population medicine can be applied to veterinary practice. Emphasis is placed on five main topics: evaluating clinical trials, choosing diagnostic tests, investigating and resolving outbreaks of disease, managing herd data, and discovering how the concepts of herd medicine might be applied to entire ecosystems. Laboratories are designed to provide students with practical experience evaluating clinical trials and analyzing herd data.

***HMT 411.3**
Diseases of Livestock
2(3L)

Provides an overview of animal disease principles in which disease mechanisms, body response to disease, diagnosis, control and prevention are emphasized. Special attention is given to infectious diseases of cattle, swine and sheep that are of economic importance to the Saskatchewan livestock industry.

HMT 460.5
Obstetrics and Reproduction (Theriogenology)
Q2(4L),Q3(4L-3P),Q4(5P)

Covers the normal reproductive patterns of domestic animals, the causes of lowered reproductive efficiency and management of reproductive problems of individual animals and herds. Laboratories are designed to enhance understanding of these aspects of theriogenology and to develop clinical skills including, male and female breeding soundness evaluation, obstetrical management and the diagnosis and treatment of reproductive problems.

VETERINARY ANATOMY

VT AN 210.7
Anatomy
Q1&2(2L-4P),Q3&4(2L-5P)

A general introduction to the anatomy of the common domestic species with emphasis on areas of particular functional and clinical significance or biological importance.

VT AN 211.4
Histology
Q1(3L-4P),Q2(3L-4P)

A general overview of the microscopic and ultrastructural anatomy of vertebrate cells, tissues and organs emphasizing functional relationships.

VT AN 212.3
Neuroscience
Q3(2L-1P),Q4(4L-2P)

Offered jointly with the Department of Veterinary Physiological Sciences.

A study of the structure and function of the nervous system of domestic animals with emphasis on general clinical applications.

VT AN 213.2
Embryology
Q1&2(1L-2P)

Emphasizes the study of embryonic development, including organogenesis and congenital anomalies.

***VT AN 314.3**
Comparative Anatomy of Domestic Animals
2(3L-2P)

A general review of the macroscopic and microscopic anatomy of the domestic animals with emphasis on those structures, such as the digestive and reproductive systems, that are of particular importance to students of Animal Science.

VETERINARY ANESTHESIOLOGY, RADIOLOGY AND SURGERY

VTARS 350.2
Veterinary Anesthesiology/ Surgical Principles
Q3(2L),Q4(3L)

An Introduction to the science and pathophysiology of veterinary anesthesiology and surgery. A multiple species approach is utilized to assist students in developing an understanding of the fundamental principles and technical skills associated with the treatment and management of surgical conditions and anesthetic principles and techniques in veterinary medicine.

VTARS 351.2
Radiology
Q3&4(2L)

Teaches the fundamentals of x-ray and ultrasound diagnosis. Using contemporary

case material from the Veterinary Teaching Hospital, the instructors endeavour to actualize the learning process, assisting the students in the transition to the clinical phase of their studies. The students, for their part, engage in regular-self assessments, lecture inquiries, and extensive classroom preparation.

VTARS 400.2
Surgical Exercises
Q1&2(3P)
Introduces the student to the practical aspects of anesthesiology and surgery prior to entering clinics. The student is expected to become familiar with the instrumentation used in surgery and anesthesia, to become proficient in manipulative skills and to know and to understand surgical and anesthetic techniques in both large and small animals.

VTARS 452.2
Large Animal Surgery
Q2(1L),Q3(2L)&Q4(3L)
A comprehensive course covering the signs, diagnosis, management and treatment of the major surgical conditions in large animals. Covers plastic and reconstructive surgery of the skin, surgery of the respiratory system, digestive system, musculoskeletal system, and the urogenital system. The major emphasis is on the equine and bovine species, but reference is made to other large animal species.

VTARS 453.2
Small Animal Surgery
Q1,2&3(2L)
A comprehensive course covering the signs, diagnosis, management and treatment of the major surgical conditions in small animals. A case-based method is used to cover the discipline of neurosurgery, urogenital surgery, surgery of the respiratory and cardiovascular systems, reconstructive surgery of the skin, surgery of the ears and the gastrointestinal tract, orthopedic surgery and oncology.

VETERINARY INTERDEPARTMENTAL

VTINT 201.1
Survey of Veterinary Medicine
Q1(1L-1P)
A series of seminars introducing the student to the veterinary profession. Topics include career opportunities in veterinary medicine, professional behaviour and professionalism, ethics, the human-animal bond, animal rights and welfare, etc.

VTINT 481.3
Year III Clinics
Q1,2,3&4(3P)
This is the initial, formal introduction to clinics and consists of rotation through selected clinical areas. Experiences will include working with clinical cases as an assistant to Year 4 students (including surgery), receiving duty, participation in clinical rounds, working with medical records, pharmacy management, etc. Specific types of experiences will vary among the rotations. The objectives of the course are to obtain "hands-on" clinical experience at an introductory level, to have an opportunity for correlating basic and applied sciences to this clinical experience, and to become acquainted with the operation and organization of the Veterinary Teaching Hospital.

VTINT 580.34
Applied Veterinary Medicine (Clinics)
Q1,2,3&4(32hrs/wk)
Full-time course load for Year 4 WCVM students. Provides students an opportunity to develop, integrate and apply veterinary medical knowledge and skills in a clinical setting under faculty supervision. Consists of 32 weeks of clinical and other applied experiences. Most of these are clinical rotations in the Veterinary Teaching Hospital but experiences outside of WCVM are permitted. Each student is required to write and submit a satisfactory case report based on one of their experiences during the session.

VETERINARY INTERNAL MEDICINE

VT IM 371.4
General Internal Veterinary Medicine
Q2(2L),Q3(4L),Q4(4L-2P)
A series of lectures dealing with the general aspects of the etiology, pathophysiology, clinical and laboratory findings, diagnosis and principles of treatment of generic diseases of the body systems of domestic animals. The emphasis is on the principles of pathophysiology as they relate to the diagnosis and rational treatment of disease.

VT IM 400.2
Veterinary Medical Exercises
Q1&2(3P),Q3(2P),Q4(1P)
A series of clinical laboratory exercises which allow the student to learn the common restraint and diagnostic techniques which are necessary to handle animals and to make a clinical diagnosis. Students are taught how to conduct a complete clinical examination of all domestic animals. Special diagnostic techniques for the examination of each body system are also demonstrated.

VT IM 472.4
Large Animal Internal Medicine
Q1&2(2L),Q3(4L),Q4(5L)
A series of lectures which deal with the specific diseases of domestic farm animals (cattle, sheep, goats, and pigs) and horses. Emphasizes the etiology, epidemiology, pathogenesis, clinical and laboratory findings, diagnosis, treatment and control of the common diseases which occur in domestic farm animals. Some lectures deal with the important exotic diseases which are potential threats to the livestock industry.

VT IM 473.3
Small Animal Internal Medicine
Q1&2(4L),Q3(2L)
A series of lectures which deal with the specific diseases of small animals (dogs and cats). The emphasis is on the etiology, pathogenesis, clinical and laboratory findings, diagnosis and treatment of common diseases which occur in dogs and cats.

VETERINARY MICROBIOLOGY

VT MC 236.3
Epidemiology and Public Health
Q4(2L-2P)
An introduction to the study of the dynamics of disease in animal populations. Topics include the strategy of epidemiology, sampling techniques, data collection and analysis, hypothesis formulation and testing, and directed actions against disease in populations.

VT MC 330.2
Immunology
Q3(3L-3P)
Covers basic aspects of humoral and cell-mediated immunity, the role of immunological reactions in infectious disease pathogenesis, hypersensitivity, and auto-immune disease. Students will study the principles of immunity to bacteria, viruses and parasites and the fundamentals of vaccination. Students will also be familiarized with diagnostic techniques for assessing the immune system and for diagnosis of immune-mediated diseases.

VT MC 333.2
Virology
Q3(3L-3P)
A case-based approach to veterinary virology. Cases from WCVM files and published literature supplemented by lectures on basic virology used to illustrate general principles of virus infection, replication, spread and control.

VT MC 337.3
Veterinary Bacteriology and Mycology
Q1&2(2L-2P)
Provides basic knowledge of the common bacterial and fungal diseases of animals, with emphasis on those present in North America. Coverage of specific diseases/organisms include: distribution, epidemiology, mechanisms of pathogenesis, immunity, diagnosis, and prevention. Laboratory sessions emphasize the proper selection, collection and transportation of bacteriologic and fungal specimens. Basic processing of clinical/pathological specimens and identification of bacteria and fungal organisms commonly present in those specimens is offered.

VT MC 338.3
Parasitology
Q2&3(2L-3P)
Protozoan, helminth and arthropod parasites of domestic and other animals will be studied. The course will cover aspects of epidemiology, pathogenesis, diagnosis, treatment and preventive measures in parasitic diseases.

VETERINARY PATHOLOGY

VT PA 342.3
General Pathology
Q1&2(3L-4P)
Basic pathogenic mechanisms that underlie disease processes are discussed. Functional derangements are correlated with structural alterations. The following topics are considered: cell and tissue injury, disturbances of circulation and hemostasis, inflammation, healing and repair, immunopathology, disturbances of growth and neoplasia.

VT PA 343.5
Systemic Pathology
Q3(3L-4P),Q4(3L-3P)
The principles discussed in general pathology will be utilized in the consideration of the pathology of specific diseases which affect the body systems of domestic animals. Principles of pathogenesis and diagnosis will be stressed.

***VT PA 412.3**
Diseases of Poultry
2(2L-1P)
Designed to provide information on the causes, signs and control of common poultry diseases for students with little or limited background in the anatomy, physiology, microbiology and pathology of the avian species. Emphasizes the effect of disease as a limiting factor in efficient poultry production and the control of disease on a modern poultry farm. Given in alternate years.

VT PA 445.2
Avian and Laboratory Animal Medicine
Q3(3L-1P),Q4(2L-1P)
Common diseases of poultry, other avian species, laboratory animals and caged pets are discussed. Diagnosis and pathology are emphasized. The general principles of preventive medicine in poultry and laboratory animals are reviewed. The principles of treatment of diseases in avian and other caged pets are also reviewed. The use of animals in research is discussed.

VT PA 446.2
Clinical Pathology
Q1&2(2L-2P)
Designed to teach the student how to interpret laboratory data and apply practical clinical laboratory techniques in chemistry, hematology, cytopathology and urology in the diagnosis of disease.

VETERINARY PHYSIOLOGICAL SCIENCES

VT P 221.8
Physiology I
Q1(3L),Q2(2L-3P),Q3(3L-5P),Q4(3L-5P)
Prerequisite(s): Registration in the D.V.M. program or permission of the instructor.
The function of the physiological systems of mammals is studied with emphasis upon domestic animals and veterinary medical aspects. After an introductory consideration of hematology and of certain aspects of general physiology, the physiology of the cardiovascular, respiratory, renal and endocrine systems is studied. In the laboratory the principles of physiology are

demonstrated through laboratory experiments and observations upon the normal animal. An understanding of contemporary physiological measurement techniques is stressed as a background for potential clinical application.

VT P 320.2
Physiology II
Q1(3L),Q2(4P)

Prerequisite(s): VT P 221.

A continuation of Physiology I in which the digestive systems of monogastrics and ruminants are studied. Laboratory experiments are designed to illustrate the principles covered in the lecture material.

VT P 323.3
Basic Principles of Pharmacology
Q1(3L),Q2(2L),Q3(2L-1P),Q4(2L)

Prerequisite(s): Registration in the D.V.M. program or permission of the instructor.

General pharmacological principles are reviewed. The pharmacology of important drugs is discussed with emphasis on mechanism of action, absorption, distribution, metabolism, excretion, uses, and toxicity. Chemotherapeutic drugs are considered from the viewpoint of: action on the parasitic organism, spectrum of activity, development of resistance, and toxicity in the host.

***VT P 324.3**
Animal Physiology I
1(3L-3P)

To provide undergraduate students with an understanding of mammalian and avian physiology, with major emphasis on domestic farm animals. Topics include hematology, respiration, the cardiovascular system, renal physiology and monogastric digestion.

***VT P 325.3**
Animal Physiology II
2(3L-3P)

Prerequisite(s): VT P 324.

To provide undergraduate students with an understanding of mammalian and avian physiology, with major emphasis on domestic farm animals. Topics include ruminant digestion, endocrinology, prenatal growth, reproduction and lactation.

VT P 424.2
Toxicology
Q1(3L),Q2(2P)

A consideration of toxic agents, their principles, modes of action and manifestations in affected animals; and a brief survey of important poisonous plants of western Canada.

***VT P 425.3**
Introduction to Toxicology
1/2(3L-1S)

Prerequisite(s): PHSIO 212 or equivalent; BIOCH 200 and 211 (or 203) recommended.

An introduction to the basic knowledge about toxic substances; their chemistry, sources, modes of exposure, influence on life processes, overall effect on living organisms (with particular reference to vertebrates) and the principles exercised for the use of antidotal or preventive measures against these compounds.

VT P 426.2
Veterinary Clinical Pharmacology
Q1(3L-1P),Q2(1L-2P)

Pharmacology as it applies to the treatment of animals with clinical disease will be emphasized through a combination of lectures and practicum sessions. Principles of clinical pharmacokinetics, drug interactions and adverse drug reactions will be addressed. Lectures on specific groups of drugs will utilize a system-oriented approach. Practicum sessions consist of discussions of the pharmacologic management of specific diseases and rationale for drug selection.

***VT P 428.3**
Gastrointestinal Physiology
1(3L)

Prerequisite(s): PHSIO 333 or permission of the instructor.

Provides an in-depth coverage of monogastric gastrointestinal function, stressing those aspects related to the understanding of diseases of this system.