

Veterinary Medicine and Surgery (V_M_S)

V_M_S 6001: Topics in Veterinary Medicine

Current topics, infrequently-taught courses, or new courses not yet designated by a permanent course number. Some sections may be graded A-F only or S/U only. Course instructor consent prior to enrollment is required.

Credit Hour: 0.5-6

Prerequisites: Restricted to Veterinary Medicine students

V_M_S 6002: Veterinary Raptor Medicine

This multiple-block course is designed to introduce veterinary students to wildlife rehabilitation practices through lectures, laboratories, hands-on rehabilitation, and release of wild birds of prey. Professional veterinary students organize this course with oversight by the course directors. Graded on S/U basis only.

Credit Hours: 0.5

V_M_S 6004: Special Topics in Bovine Reproduction

This course provides students with a foundation in bovine reproductive anatomy and physiology and then applies this knowledge to real-world reproductive management through the dissection of estrous synchronization protocols, the application of artificial insemination, and the performance of pregnancy examinations. The importance of analysis of herd data is emphasized. Management of pathologic conditions such as abnormalities of cyclicity and parturition are discussed. Current topics of industry interest in Missouri such as assisted reproductive technologies, genomics and the impact of fescue toxicosis on bovine reproductive performance are also presented. Graded on S/U basis only.

Credit Hour: 1-1.5

Prerequisites: VM1 standing

V_M_S 6005: Clinical Skills

A hands-on laboratory class to provide experience with handling and examining Horses, Cattle, Small ruminants and Camelid species, Cats and Dogs for veterinary students.

Credit Hours: 0.5

Prerequisites: first year veterinary students. Graded on S/U basis only

V_M_S 6006: Clinical Skills

A hands-on laboratory class to provide experience with handling and examining Horses, Cattle, Small ruminants and Camelid species, Cats and Dogs for veterinary students. Graded on S/U basis only.

Credit Hours: 0.5

Prerequisites: first year veterinary students

V_M_S 6007: Healer's Art: Awakening the Heart of Medicine

The Healer's Art is set-up as a 15-hour elective course for VM1 and VM2 students. The 15 contact hours are achieved across 5 evening sessions. Each three-hour session is divided into a large-group and small-group experience. The course addresses the hidden crisis in veterinary medicine - the growing loss of meaning and commitment

experienced by veterinarians under the stresses of today's world. The curriculum is process-based and enables the formation of a community of open dialogue between students and faculty. The tools used in the course include faculty sharing from personal experience, generous listening and open discussion in the small group setting, experiential learning, and reflection exercises. Graded on S/U basis only.

Credit Hour: 1

Prerequisites: VM1 and VM2

V_M_S 6010: Evaluated Veterinary Preceptorship

This required co-op style course provides the student with practical exposure and experience in nonacademic veterinary medicine. Duration of 2-6 weeks. Graded on S/U basis only.

Credit Hour: 1-99

Prerequisites: VM-3 standing

V_M_S 6020: Veterinary Radiology with Laboratory

Introduces through lectures and demonstrations the principles of radiographic examination and interpretation of disease processes of domestic animals. Instructional period 8.

Credit Hours: 2

V_M_S 6030: Veterinary Anesthesiology with Laboratory

Basic principles of anesthesiology for any species of domestic and exotic animals. Instructional period 9.

Credit Hours: 2

V_M_S 6040: Companion Animal Medicine with Laboratory

Covers basic principles of veterinary internal medicine and selected subdisciplines. Instructional period 9.

Credit Hours: 4

V_M_S 6050: Small Animal Medicine

Didactic presentations regarding pathophysiology, diagnosis and therapeutic management of organ system diseases in small animals.

Credit Hours: 2.5

V_M_S 6060: Small Animal Surgery with Laboratory

Basic principles including suture materials, suture patterns, operative techniques, wound healing, and body system approach to soft tissue surgery conditions.

Credit Hours: 2

V_M_S 6071: Small Animal Surgery

Continuation of V_M_S 6060 lectures, focusing primarily on orthopedics.

Credit Hours: 2

V_M_S 6072: Optional Surgery and Anesthesia Laboratory

Designed to teach entry-level surgical and anesthesia skills using models, live animals, and cadavers. This laboratory is offered as a substitute to V_M_S 6073 for students who wish to gain anesthesia and surgical experience with live tissues. Graded on S/U basis only.

Credit Hour: 1

Prerequisites: V_M_S 6060

V_M_S 6073: Fundamental Surgery Laboratory

Designed to teach entry-level surgical skills using models and cadavers. Canine cadavers will be substituted for pigs in the first two celiotomy laboratories. Students will not anesthetize pigs but will observe clinical anesthesia by following one clinical case from start to finish. Graded on S/U basis only.

Credit Hour: 1

Prerequisites: complete V_M_S 6060

V_M_S 6081: Food Animal Medicine and Surgery

Covers the important diseases of cattle, goats, sheep, camelids, and swine recognition, management and prevention of diseases are stressed.

Credit Hours: 2.5

V_M_S 6082: Food Animal Medicine and Surgery

Continuation of V_M_S 6081. Covers the important diseases of cattle, goats, sheep, camelids, and swine recognition, management and prevention of diseases are stressed.

Credit Hours: 2

V_M_S 6090: Small Animal Emergency and Critical Care with Laboratory

Basic principles of emergency and critical care of companion animals, and body system approach to emergency and critical care.

Credit Hour: 1

V_M_S 6100: Evaluation of Animal Disease Monitoring and Surveillance Pro

(cross-leveled with V_M_S 8100). This course will allow students to articulate and share what they have learned in coursework and to supplement previous learning by exploring additional areas of knowledge relevant to their readiness for professional practice. It will enable students to test theoretical knowledge against real life practical experiences, and to integrate and refine basic and advanced concepts, values, and methods acquired during the professional education. Graded on A-f only.

Credit Hours: 2

Prerequisites: second year standing in the DVM program, enrollment in the dual degree MPH program, or consent of instructor

V_M_S 6110: Theriogenology

Reproductive function, estrous cycle manipulation, and breeding of individual domestic animals and herds. Pathogenesis, diagnosis and management (medical and surgical) of common reproductive disorders.

Credit Hours: 3

V_M_S 6120: Veterinary Ophthalmology

Covers examination, diagnostic procedures and treatment of important eye diseases of domestic animals.

Credit Hour: 1

V_M_S 6130: Fundamentals of Veterinary Business Management

To realistically present to the second-year veterinary student a basic explanation of the essential need for strong base of knowledge pertaining to business and management in order to be successful in the veterinary profession.

Credit Hour: 1

V_M_S 6135: Foundations of Financial Success

College of Veterinary Medicine students will make hundreds of financial decisions that will impact not only their current well-being, but future financial situations as well. Knowing how to manage money, identify goals, and take steps to make them happen is key to a healthy relationship with your finances. In this course, students will work on developing skills in setting financial goals, budgeting, financial self-assessments, leveraging resources, safe and smart use of credit (and debit) cards, avoiding financial hazards, and student loan repayment. A financially savvy student does not just understand why and how to make healthy personal financial choices; they see how those choices fit into the larger picture, they practice those choices daily, and they help others in their families and communities to cultivate financial wellness. Graded on S/U basis only.

Credit Hour: 1

Prerequisites: VM 1 student

V_M_S 6140: Nutrition with Laboratory

Nutrition of companion and food producing animals and nutritional principles important to veterinary medicine. Subjects presented include feeding of animals for maintenance of healthy conditions during all life stages, evaluation of foods and supplements, and methods of diet formulation and evaluation.

Credit Hour: 1.5

V_M_S 6151: Equine Medicine and Surgery

Covers the fundamentals of diseases of the equine species. Case Management approaches are utilized to provide examples of disease conditions.

Credit Hours: 2

V_M_S 6152: Equine Medicine and Surgery

Continuation of V_M_S 6151. Covers the fundamentals of diseases of the equine species. Case Management approaches are utilized to provide examples of disease conditions.

Credit Hour: 1.5

V_M_S 6400: Food Animal Medicine and Surgery I

Clinical Rotation. Technical, diagnostic and therapeutic procedures common to the practice of large animal medicine and surgery. Experience in the operation of a large animal hospital and farm outpatient practice.

Credit Hours: 6

V_M_S 6411: Small Animal Internal Medicine

Clinical rotation in small animal internal medicine for veterinary degree students. Students will obtain history and conduct physical examination of client-owned dogs and cats. After reviewing findings with faculty, they will

perform diagnostic tests and carry out treatments. Graded on A-F basis only. May be repeated for credit.

Credit Hour: 1-99

Prerequisites: the entire pre-clinical curriculum of the CVM must be completed before taking this course; that is, students must have successfully completed the DVM curriculum through instruction period 12. Restricted to students in years 3 and 4 of the DVM curriculum

V_M_S 6412: Small Animal Primary Care/Community Practice

Clinical rotation in Small Animal Community Practice covers Dermatology, Dentistry and Primary Care Cases for dogs and cats. This is a core course for all MU CVM students. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: the entire pre-clinical curriculum of the CVM must be completed before taking this course; students must have successfully completed the DVM curriculum through instructional period 12. Restricted to students in years 3 and 4 of the DVM curriculum

Recommended: V_M_S 6400 and V_M_S 6500

V_M_S 6413: Small Animal Behavior and Dermatology

The Small Animal Behavior and Dermatology Rotation is designed to give students experience in the evaluation and management of dogs and cats with behavioral problems and to provide students with hands-on experience in the evaluation, diagnosis and management of dermatology cases. During the rotation the student will develop skills in history taking, behavioral evaluations, dermatology examinations and diagnostic procedures and in the management of behavioral and dermatology cases. Graded on A-F basis only.

Credit Hours: 2

Prerequisites: Restricted to third- and fourth-year Veterinary Medicine students

V_M_S 6414: Shelter Medicine

Clinical rotation in shelter medicine for veterinary degree students. Students will conduct physical examination of shelter/rescue dogs and cats and perform sterilization procedures. During the rotation, students will develop skills in physical examination, low-stress handling techniques, anesthesia induction and monitoring, and high quality, high volume spay and neuter techniques. Students will gain an understanding of the role of shelters and rescues in the community, shelter animal care, and a health-work life balance. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: The entire pre-clinical curriculum of the CVM must be completed before taking this course; students must have successfully completed the DVM curriculum through didactic instructional period 11. Restricted to students in years 3 and 4 of the DVM curriculum

V_M_S 6420: Equine Medicine and Surgery I

Clinical rotation. Technical, diagnostic and therapeutic procedures common to equine practice. Emphasis on fundamental principles.

Credit Hours: 6

V_M_S 6432: Small Animal Soft Tissue Surgery

Clinical rotation. Diagnostic procedures and surgical techniques applicable to companion animal soft tissue surgery. Practical experience in the operation of a small animal soft tissue surgical practice.

Credit Hours: 2

Prerequisites: completion of Vet Med years 1 and 2 and specifically V_M_S 6072 or V_M_S 6073

V_M_S 6434: Small Animal Orthopedic Surgery

Clinical rotation. Diagnostic procedures and surgical techniques applicable to companion animal orthopedic surgery. Practical experience in the operation of a small animal orthopedic surgical practice. Graded on A-F basis only.

Credit Hours: 2

Prerequisites: completion of Veterinary Medicine years 1 and 2

V_M_S 6436: Veterinary Neurology/Neurosurgery

Clinical rotation. A hands-on applied clinical rotation to provide experience in examination and diagnosis of domestic animals with neurologic disease.

Credit Hours: 2

Prerequisites: completion of preclinical curriculum of Veterinary Medicine years 1 and 2. Restricted to VM3 and VM4 students

V_M_S 6441: Clinical Radiology I

Clinical rotation. Fundamentals of radiology: indications for use, techniques, pathophysiologic alterations, interpretation of results, patient aftercare, protective measures against radiation hazards.

Credit Hours: 3

V_M_S 6442: Clinical Anesthesiology I

Clinical rotation. Fundamentals of anesthesiology: indications for use techniques, pathophysiologic alterations, and interpretations of results, patient aftercare.

Credit Hours: 3

V_M_S 6450: Theriogenology I

Clinical rotation. Practical experience in reproductive techniques, obstetrics, breeding soundness and herd reproductive problems.

Credit Hours: 2

V_M_S 6460: Clinical Ophthalmology I

Clinical rotation. Practical application in problem solving and medical and surgical management of eye conditions of domestic animals.

Credit Hours: 2

V_M_S 6490: Small Animal Specialty Medicine I

Clinical rotation in small animal oncology. Taught in the clinical setting using animals presented to the VMTH for evaluation and treatment of oncologic diseases.

Credit Hours: 2

V_M_S 6700: Food Animal Medicine and Surgery II Elective

Additional food animal experience located off-site or on-site under special circumstances.

Credit Hour: 2-6

Prerequisites: V_M_S 6400. Consent required

V_M_S 6710: Small Animal Medicine II Elective

Clinical rotation offered to VM3 and VM4 students. Opportunity for concentrated study and experience in medical areas. Enrollment subject to approval of course coordinator.

Credit Hour: 2-6

Prerequisites: The entire pre-clinical curriculum of the CVM must be completed before taking this course

V_M_S 6711: Small Animal Internal Medicine Elective Clinical or Research Rotation

Clinical rotation in SAIM to focus on either clinical diagnostics and therapy, or research relevant to clinically important issues of pet animals.

Credit Hours: 2

Prerequisites: Veterinary curriculum up until the clinical rotations; must be VM3 or VM4 students

V_M_S 6712: Private Practice Small Animal Internal Medicine Elective

Clinical rotation. Improve critical thinking skills in disease diagnosis and management for internal medicine of dogs and cats. Clinical rotation off-site at Associated Veterinary Specialists. Teaching by cases seen by AVS clinician on duty. Student participation determined by supervising clinician.

Credit Hours: 2

Prerequisites: All required VM1 and VM2 courses. VM3 or VM4 standing required

V_M_S 6713: Shelter Medicine Elective at the Humane Society of Missouri

Comprehensive shelter medicine rotation at Humane Society of Missouri.

Credit Hour: 2-6

Prerequisites: Restricted to VM3 and VM4 students

V_M_S 6714: Shelter Medicine Clinical Elective

The shelter medicine clinical elective provides the veterinary student with a diverse training experience in shelter medicine accompanied by exposure to the critical aspects of animal sheltering. Graded on A-F basis only.

Credit Hours: 2

Prerequisites: Restricted to Veterinary Medicine students

V_M_S 6720: Equine Medicine and Surgery II Elective

Clinical rotation. Continuation of V_M_S 6420. Open to VM3 and VM4 students, subject to approval of course coordinator. Opportunity for concentration in specific area of interest.

Credit Hour: 2-6

V_M_S 6732: Small Animal Soft Tissue Surgery II Elective

Clinical rotation. Opportunity for concentrated study and advanced soft tissue surgical experience.

Credit Hours: 2

Prerequisites: V_M_S 6432 and completion of year VM1 and VM2

V_M_S 6734: Small Animal Orthopedic Surgery II Elective

Clinical rotation. Opportunity for concentrated study and advanced orthopedic surgical experience.

Credit Hours: 2

Prerequisites: completion of VM years 1 and 2

V_M_S 6736: Veterinary Neurology/ Neurosurgery-Elective

A hands-on applied clinical rotation to provide experience in examination and diagnosis of domestic animals with neurologic disease.

Credit Hours: 2

Prerequisites: completion of preclinical curriculum of Veterinary Medicine years 1 and 2. Restricted to VM3 and VM4 students

V_M_S 6741: Clinical Radiology II Elective

Clinical rotation. Continuation of V_M_S 6441.

Credit Hour: 1-99

V_M_S 6742: Clinical Anesthesiology II Elective

Clinical rotation. Continuations of V_M_S 6442. This course will focus on anesthetizing and monitoring the more challenging anesthetic cases during rotation. Required projects include a review paper on a relevant topic of choice, a written case report and assistance in research activities.

Credit Hour: 1-99

V_M_S 6743: Radiology - Special Imaging Elective

Introduction to special imaging modalities including ultrasound, computed tomography, magnetic resonance and nuclear scintigraphy with emphasis towards small animal patients. A major part of the course will be devoted to recognition and interpretation of abdominal ultrasound. Graded on A-F basis only. Prerequisites: V_M_S 6020; VM III and VM IV

Credit Hour: 2-3

V_M_S 6750: Theriogenology II Elective

Continuation of V_M_S 6450. Opportunity for concentrated study and experience. An elective, subject to approval of course coordinator and faculty member(s) who supervise student's work.

Credit Hour: 1-99

V_M_S 6751: External Food Animal Service and Theriogenology Teaching Program

Additional options for off-site clinical training in Theriogenology and Food Supply Veterinary Medicine beyond the core curriculum.

Credit Hour: 1-99

Prerequisites: V_M_S 6081, V_M_S 6082, V_M_S 6110, and VM3 or VM4 students

V_M_S 6760: Small Animal Nutrition

Clinical rotation designed to allow students to gain hands-on experience with canine and feline nutrition.

Credit Hours: 2

Prerequisites: V_M_S 6140. Restricted to VM3 or VM4

V_M_S 6800: Clinical Ophthalmology II Elective

Clinical rotation offered to VM 3 and VM 4 students. Opportunity for concentrated study and experience. Subject to approval of course coordinator and faculty member(s) who supervise student's work.

Credit Hour: 1-99

V_M_S 6810: Cardiology II Elective

Cardiology course consists of a three-week clinical rotation in the small animal clinic. Duties include primary care receiving and patient care with clinical case work-up. Additional responsibilities include attendance at clinical rounds and participating in related clinical activities.

Credit Hour: 1-99

V_M_S 6820: Small Animal Emergency and Critical Care

Clinical rotation offered to VM 3 and VM 4 students. Opportunity for concentrated study and experience in small animal emergency and critical care.

Credit Hour: 1-99

V_M_S 6821: Small Animal Emergency Critical Care Elective

Clinical rotation providing focused experience in care management and issues pertinent to small animal emergency and critical care. Graded on A-F basis only. May be repeated for credit.

Credit Hour: 2-6

Prerequisites: Restricted to levels VM 3 or VM 4

V_M_S 6830: Food Animal Production Medicine

Clinical rotation will focus primarily on beef, dairy, and swine with emphasis on preventive medicine by looking at the herd incorporating spreadsheet and the date base application analysis. The course participants will visit various operations and write reports to the producer, which will enhance their farms.

Credit Hour: 1-99

V_M_S 6850: Clinical Oncology

Clinical rotation in small animal oncology. Taught in the clinical setting using animals presented to the VMTH for evaluation and treatment of oncologic diseases.

Credit Hour: 1-99

V_M_S 6920: Equine Techniques Elective

This course provides an opportunity for equine oriented veterinary students wishing to enhance their understanding of the clinical techniques used in equine veterinary medicine and gain hands on practical experience in selected clinical techniques. It is offered as a 2 credit, 2 week elective clinical rotation.

Credit Hours: 2

V_M_S 6986: Advanced Clinical Neurology and Neurosurgery

This is a supplement to neurology taught in the small animal course to improve preparedness for clinical practice. Topics include neurolocalization techniques, electrodiagnostic and CT/MR interpretation, wider exposure to differential diagnosis, and neurosurgical principals.

Credit Hour: 1

Prerequisites: Passing grade in V_M_S 6040

V_M_S 6987: Problem-Based Learning Clinic Preparation

This course is designed to prepare the VM 3 student about to enter clinics for a systematic approach to a clinical case. Emphasis will be placed on developing focused problem and differential lists, and logical choices of diagnostic tests. Graded on S/U basis only.

Credit Hour: 1

Prerequisites: VM 3 level

V_M_S 6988: Small Animal Clinical Nutrition

Application of nutritional principles to prevention and management of common diseases of dogs and cats. Including review of nutrients, commercial and home diets, and basic pathophysiology of nutritional aspects of disorders seen in companion animal practice.

Credit Hour: 1

V_M_S 6989: Advanced Oncology of Animals

Expanded discussion of veterinary oncology topics not covered in the oncology section V_M_S 6050. Important for veterinary students who intend to enter private or academic practice and manage oncology cases, specific tumor types, diagnostic tools, and treatment modalities.

Credit Hour: 1

V_M_S 6990: Zoological Medicine

Interested students of Zoological Medicine would significantly broaden their understanding of this discipline and increase the likelihood they could enter zoological veterinary practice or a zoological veterinary medical residency. Graded on A-F basis only

Credit Hours: 2

V_M_S 6991: Advanced Equine Lameness with Laboratory

Learn to recognized forelimb and hind limb lameness through diagnostic techniques for localization of lameness. Gain practical experience in limb support for sever musculoskeletal injuries. One surgical laboratory using equine cadaver limbs to illustrate and practice common distal limb surgeries.

Credit Hour: 1

V_M_S 6993: Advanced Veterinary Anesthesia

Advanced Veterinary Anesthesia

Credit Hour: 1

V_M_S 6994: Advanced Techniques in Small Animal Surgery with Laboratory

Course designed for students who want exposure to small animal surgical techniques above and beyond the experience gained from the basic surgical training in V_M_S.

Credit Hour: 1

Prerequisites: V_M_S 6072; limited enrollment

V_M_S 6995: Clinical Cardiology

Students will utilize a combination of lectures, hands on laboratories, and problem based clinical correlates covering cardiovascular physical

examination, radiographic and electrocardiographic interpretation, and the pathophysiology and management of congenital and acquired cardiac diseases.

Credit Hour: 1

V_M_S 6996: Advanced Dermatology

This is a lecture course that will supplement and expand upon the canine and feline dermatology principles covered in the general pathology and small animal medicine courses. Graded on A-F basis only.

Credit Hour: 1

Prerequisites: V_M_S 6050

V_M_S 6997: Food Animal Diagnostic Exercises

Discussion based course designed to integrate and review didactic coursework to increase knowledge of livestock diseases. A list of appropriate differential diagnoses will be generated for each problem.

Credit Hour: 1

V_M_S 6998: Small Animal Behavioral Medicine

Small Animal Behavioral Medicine

Credit Hour: 1

V_M_S 6999: Food Animal Surgery Laboratory

Routine food animal surgical procedures laboratory.

Credit Hour: 1

V_M_S 7301: Topics in Veterinary Medicine and Surgery

Organized study of select topics.

Credit Hour: 1-99

Prerequisites: junior standing and instructor's consent

V_M_S 7320: Fundamentals of Small Animal Emergency and Critical Care

(cross-leveled with BIOMED 4320, VET_TCH). This course will provide students with the knowledge and skills to assist in a small animal medical emergency and critical care facility.

Credit Hours: 3

Prerequisites: a bachelor's degree in biological science or veterinary technology, or DVM degree, or instructor's consent

V_M_S 7328: Introductory Radiation Biology

(same as RADIOL 7328, NU_ENG 7328, BIO_SC 7328).

Credit Hours: 3

Prerequisites: junior standing Sciences/Engineering; one course in biological sciences and physics/chemistry; or instructor's consent

V_M_S 7355: Advanced Techniques in Radiology

Special application to domestic animals.

Credit Hour: 1-99

Prerequisites: D.V.M

V_M_S 7510: Equine Clinical Anatomy: Forelimbs

Basic Foundation in selected aspects of equine clinical anatomy for veterinary technicians, pre-veterinary students, and other students wishing to enhance their understanding of anatomical structure of the horse's forelimbs.

Credit Hour: 1

Prerequisites: A bachelor's degree in a biological science or veterinary technology, or DVM degree, or instructor's consent

V_M_S 8021: Neurology Journal Review

Weekly journal review and seminar on current topics in veterinary neurology, related clinical disciplines and basic neurosciences. Graded on S/U basis only.

Credit Hour: 1

Prerequisites: DVM degree

V_M_S 8022: Internal Medicine Clinicopathologic Conference

Advanced discussion of small animal medicine cases with an emphasis on pathophysiology and clinicopathologic findings. Graded on S/U basis only.

Credit Hour: 1

V_M_S 8023: Internal Medicine Journal Review

Resident led review of the current veterinary internal medicine literature. Graded on S/U basis only.

Credit Hour: 1

V_M_S 8024: Medicine-Surgery-Pathology Conference

This is a case-based course in which clinical and pathological findings of interesting cases from the VMTH are presented by those who treated and interpreted the case. Dogs, cats, cows, horses, and small ruminants are included with occasional non-traditional species. Graded on S/U basis only.

Credit Hour: 1

V_M_S 8025: Equine Medicine Journal Review

Aid Residents in preparing for board certification in ACVIM and ACVS. Articles pertaining to current equine veterinary literature are reviewed on a weekly basis. Participants select, distribute articles to group prior to meeting, then present short review with a discussion following. Graded on S/U basis only.

Credit Hour: 1

V_M_S 8026: Surgery Journal Review

Resident led review of the current veterinary surgical peer-reviewed literature. Graded on S/U basis only.

Credit Hour: 1

V_M_S 8027: Food Animal Medicine Journal Review

Critical review of the scientific literature with a focus on ACVIM board preparation. May also be used as a forum for information exchanged relevant to ACVIM board preparation. Graded on S/U basis only.

Credit Hour: 1

V_M_S 8028: Cardiovascular Medicine Journal Review

Resident led review of the current veterinary cardiovascular medicine literature. Graded on S/U basis only.

Credit Hour: 1

V_M_S 8029: Emergency and Critical Care Journal Review

This course will concentrate on review of emergency and critical care literature. Graded on S/U basis only.

Credit Hour: 1

Prerequisites: DVM degree

V_M_S 8030: Seminars in Vet. Med. & Surgery: Ophthalmology Pathology Seminar

Review of clinical cases presented in two formats: histopathology slides and kodachrome slides. Graded on S/U basis only.

Credit Hour: 1

Prerequisites: DVM degree or equivalent and acceptance into an ophthalmology residency program

V_M_S 8031: Sem. in Vet. Med & Surgery: Ophthalmology Seminar & Journal Review

Weekly journal review and seminar on current topics in veterinary ophthalmology, review of pertinent literature in human ophthalmology, and review of ophthalmic texts. Graded on S/U basis only.

Credit Hour: 1

Prerequisites: DVM or equivalent degree and acceptance into the ophthalmology residency program

V_M_S 8032: Seminars in Veterinary Anesthesiology

A journal review will focus on advances in veterinary anesthesiology, pharmacology, and physiology. Graded on S/U basis only.

Credit Hour: 1

Prerequisites: DVM and graduate school enrollment or instructor's consent

V_M_S 8033: Seminars in Clinical Sciences-Equine Surgery Journal Review

Journal review will focus on advances in equine surgery and will consist of a review of recent manuscripts pertaining to equine surgery in current journals and review of pertinent book chapters. Graded on S/U basis only.

Credit Hour: 1

Prerequisites: DVM degree and instructor's consent

V_M_S 8034: Seminars in Veterinary Radiology

This journal review will focus on advances in veterinary radiology, ultrasound and alternate imaging. Current and past literature will be reviewed weekly and will be chosen by the class coordinator. Graded on S/U basis only.

Credit Hour: 1

Prerequisites: DVM and graduate school enrollment or instructor's consent

V_M_S 8036: Advanced Physiology of the Dog and Cat

To understand advanced medical physiology: cell physiology, muscle function, cardiac and circulatory physiology, renal function, distribution of fluid in the body, functions of red and white blood cells, mechanisms of hemostasis, resistance to infection and pulmonary physiology. Graded on A-F basis only.

Credit Hours: 2

Prerequisites: Instructor's consent

V_M_S 8040: Advanced Small Animal Clinical Nutrition

Advanced study of veterinary clinical nutrition in the dog and cat. Includes review of applied biochemistry, nutrients, and feeding principles along with pathophysiology and nutritional management of common diseases. May be repeated for credit. Graded on A-F basis only.

Credit Hours: 2

Prerequisites: Introductory Veterinary Nutrition

V_M_S 8090: Research in Veterinary Medicine and Surgery (Thesis)

Thesis research. Graded on a S/U basis only.

Credit Hour: 1-99

V_M_S 8100: Evaluation of Animal Disease Monitoring and Surveillance Programs

This course will allow students to articulate and share what they have learned in coursework and to supplement previous learning by exploring additional areas of knowledge relevant to their readiness for professional practice. It will enable students to test theoretical knowledge against real life practical experiences, and to integrate and refine basic and advanced concepts, values, and methods acquired during the professional education. Graded on A-F basis only.

Credit Hours: 2

V_M_S 8303: Advanced Topics in Veterinary Anesthesiology

Exposition and critical analysis of topics relevant to the theoretical understanding, basic science, and clinical application/delivery of anesthetics and anesthesia in the veterinary setting. Graded on A-F basis only.

Credit Hour: 1-3

Prerequisites: Graduate student in Biomedical Sciences emphasis Veterinary Medicine program or instructor permission

V_M_S 8401: Topics in Veterinary Clinical Sciences

Current topics, infrequently-taught courses, or new courses not yet designated by a permanent course number. Some sections may be graded A-F only or S/U only.

Credit Hour: 1-3

V_M_S 8402: Seminar in Veterinary Clinical Sciences

Graduate seminars and conferences with a focus on current literature within a specialty area. Graded on S/U basis only.

Credit Hour: 1

V_M_S 8405: Comparative Respiratory Pathophysiology

A consideration of clinical pathophysiology of the respiratory system relative to diseases of the thorax and clinical anesthesiology.

Credit Hour: 1

V_M_S 8406: Topics in Veterinary Medicine and Surgery

Current topics, infrequently taught courses, or new courses not yet designated by a permanent course number.

Credit Hour: 1-99

Prerequisites: must be a DVM or be enrolled in the Veterinary curriculum; instructor's consent

V_M_S 8410: Veterinary Medicine and Surgery Research Seminar

Current research in veterinary medicine and surgery. Literature reviews and presentation or original graduate student research. Graded on S/U basis only.

Credit Hour: 1

V_M_S 8411: Clinical Veterinary Endocrinology

A 2-hour course for post-DMV graduate students. It will focus on clinically relevant physiology, pathophysiology, and diagnostic evaluation of hormone systems.

Credit Hours: 2

V_M_S 8413: Equine Internal Medicine

The purpose of the course is to aid in the preparation of the Resident for board certification in the American College of Veterinary Internal Medicine-LAIM. Current concepts in the pathophysiology, diagnosis and management of medical disorders of horses.

Credit Hours: 2

Prerequisites: DVM degree or equivalent

V_M_S 8415: Advanced Veterinary Neurology

Basic neuroscience as it relates to clinical neurology and the pathophysiology of diseases of the brain, spinal cord, peripheral nerve and muscle in domestic animals. Graded on A-F basis only.

Credit Hours: 2

Prerequisites: DVM degree

V_M_S 8417: Advanced Veterinary Internal Medicine - Clinical Oncology

Provides graduate students in the clinical and basic sciences alike with a working knowledge of the biological mechanisms of cancer development and progression and the related approaches to cancer prevention and therapy. It is assumed that students will have a strong background in biology as a foundation for discussion.

Credit Hours: 2

Prerequisites: DVM or equivalent degree recommended

V_M_S 8418: Advanced Veterinary Internal Medicine: Food Animal Medicine

Current concepts in the pathophysiology, diagnosis and management of medical disorders, diseases of the limbs, and infectious diseases of cattle and food producing animals.

Credit Hours: 2

V_M_S 8419: Advanced Topics in Cancer Biology and Clinical Oncology

This course will provide students with a knowledge base in cancer cell biology that may be applied to the practice of clinical oncology. Monthly clinically-oriented seminars by invited speakers will be preceded by a weekly in-depth review of the basic science related to the seminar topic.

Credit Hours: 2

Recommended: MD or DVM

V_M_S 8421: Advanced Veterinary Surgery: Small Animal Surgery

Current concepts in the pathophysiology, diagnosis and management of surgical disease of the dog and the cat. Includes laboratories of advanced surgical techniques.

Credit Hour: 2-4

V_M_S 8423: Comparative Arthrology

Lectures and discussion covering anatomy, physiology, biomechanics, pathophysiology, and clinical aspects of mammalian diarthrodial joints.

Credit Hours: 3

V_M_S 8425: Advanced Veterinary Surgery: Equine Surgery

Current concepts in the pathophysiology, diagnosis and management of surgical disorders of the horse. Taught yearly as sections A, B, C. Repeatable to a maximum of 10 credit hours (individual sections may be taken once).

Credit Hour: 2-4

V_M_S 8426: Advanced Veterinary Surgery - Ophthalmic Surgery

Surgery labs consisting of 2-4 hours of surgical instruction per week. Graded on A-F basis only.

Credit Hour: 2-4

Prerequisites: DVM or equivalent degree and acceptance into the ophthalmology residency program

V_M_S 8431: Research Methods and Data Analysis

A consideration of research methods, data analysis, and practical approaches to analyzing data sets derived from veterinary and biomedical studies.

Credit Hours: 2

V_M_S 8432: Applied Statistics and Informatics

Educate students in the practical application of statistics and information research tools. Students will learn about application of statistical modeling to biomedical research. They will be trained to use statistical software programs and then use those skills to analyze data sets. Additionally, students will learn about the use of informatics systems for researching scientific questions, data searching, and data dissemination. At the end of the course successful students should be able to develop and perform statistical analyses appropriate for most basic research study designs. Graded on A-F basis only.

Credit Hours: 2

Prerequisites: DVM or equivalent degree and enrollment in a veterinary residency program unless an exception is approved by the course coordinator

Recommended: Successful completion of a general statistics course is highly recommended prior to taking this course

V_M_S 8435: Veterinary Clinical Sciences: Clinical Immunology
Advanced concepts in veterinary immunology and immunopathology.

Credit Hours: 2

V_M_S 8437: Advanced Topics in Veterinary Medicine (Nuclear Medicine)

An in-depth review of veterinary nuclear medicine. Includes the physics of nuclear medicine, common imaging techniques, common radiopharmaceuticals, radiopharmaceutical kinetic evaluation and some common physiological applications.

Credit Hour: 1

V_M_S 8439: Advanced Veterinary Ultrasonography

Advanced concepts in veterinary ultrasonography; including ultrasound and Doppler physics, instrumentation, examination methodology, and interpretation of studies.

Credit Hour: 2-3

V_M_S 8440: Adv Veterinary Clinical Sciences: Advanced Clinical Ophthalmology

Case-based discussion course. Graded on A-F basis only.

Credit Hour: 1-3

Prerequisites: DVM or equivalent degree and acceptance into the ophthalmology residency program

V_M_S 8445: Veterinary Critical Care and Emergency Medicine

Advanced study of veterinary critical care and emergency medicine and surgery focusing on current research and literature as well as clinical application.

Credit Hour: 2-3

V_M_S 8450: Research in Veterinary Medicine and Surgery (non-thesis)

Non-Thesis research.

Credit Hour: 1-99

V_M_S 8485: Problems in Veterinary Clinical Sciences

Supervised individuals studies arranged with a faculty member and approved by the advisory committee. Some sections may be graded A-F only or S/U only.

Credit Hour: 1-3

V_M_S 8487: Nuclear Medicine

Principles of radiation detection instrumentation, monitoring radiological safety and diagnostic procedures used on veterinary nuclear medicine.

Credit Hours: 3

Prerequisites: one year College Physics, D.V.M. degree, and departmental consent

V_M_S 8488: Radiation Therapy

Intermediate level course to review basic and advanced concepts in radiation biology, radiation physics, and clinical application of ionizing radiation for the treatment of cancer Teletherapy, brachytherapy and radiation oncology are covered.

Credit Hours: 3

Prerequisites: A basic course in radiation physics/dosimetry, radiation biology and medical oncology. One year college physics, DVM degree and departmental consent

V_M_S 8489: Veterinary Radiographic Physics

In depth review of the fundamental principles of radiographic physics, with an emphasis on preparation for the American college of Veterinary Radiology board examination. Graded on an S/U basis only.

Credit Hour: 1

Prerequisites: DVM and graduate school enrollment or instructor's consent

V_M_S 8640: Biological Radiochemistry

(same as CHEM 8640). Covers the interaction of radiation with biological material. Aspects of radiation physics, chemistry, and biology are discussed, along with the use of radiation in imaging and therapy. Graded on A-F basis only.

Credit Hours: 3
