VCM - VETERINARY CLINICAL MEDICINE

VCM Class Schedule (https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/VCM/)

Courses

VCM 290 Undergraduate Independent Research credit: 1 to 5 Hours. (https://courses.illinois.edu/schedule/terms/VCM/290/)
Supervised scholarly laboratory/field work and/or reading in fields selected in consultation with an appropriate faculty member. Approved for Letter and S/U grading. May be repeated in separate terms.

VCM 501 Zoological Medicine Seminar credit: 2 Hours. (https://courses.illinois.edu/schedule/terms/VCM/501/)
Discussion of selected topics and literature pertaining to zoological, wildlife and aquatic animal medicine and presentation of a formal seminar. May be repeated to a maximum of 6 hours. Prerequisite: Post DVM and enrolled in the Zoological and Aquatic Animal Residency Program.

VCM 503 Current Lit in Equine Med Surg credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/503/)
This course will use current primary literature in the fields of equine medicine and surgery as a gateway to discussion. Current literature will be reviewed, critiqued, and discussed in the context of current equine clinical practice. Students are expected to be graduate veterinarians with a thorough understanding of equine medical and surgical concepts before enrolling in the course. May be repeated to a maximum of 6 hours. Prerequisite: Graduate Veterinarian or consent of instructor.

VCM 504 Introduction to Veterinary Science credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/504/)
Introduces fundamental veterinary science concepts and emphasizes the development of critical skills such as formulating specific and testable questions, enhancing information literacy, and crafting persuasive, evidence-based responses to scientific inquiries. It delves into contemporary issues within veterinary medicine, underscores the significance of evaluating data validity, and establishes foundational knowledge in medical microbiology.

VCM 506 Topics in Pathophysiology credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/506/)
Advanced review and discussion of topics pertaining to the physiology/pathophysiology, diagnosis, and current therapies for diseases in the field of small animal emergency and critical care medicine. May be repeated to a maximum of 6 hours. May be repeated in separate semesters to a maximum of 6 hours. Prerequisite: DVM degree. Restricted to Vet Med students.

VCM 507 Veterinary Form and Function credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/507/)
Focuses on foundational knowledge in anatomy and physiology, with an introduction to case-based thinking while studying the major body systems. Students will learn how to identify anatomical structures in different body systems, summarize similarities and differences between species, explain normal physiological systems in domestic animal species, and predict which body systems are abnormal with case-based discussions.

VCM 508 Trans Mol Path Veterinary Dz credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/508/)
Translation Molecular Pathogenesis of Veterinary Disease (Trans Mol Path Veterinary Dz) equips graduate students with knowledge and skills needed to understand molecular pathologic processes and determine how they translate to clinical manifestations of disease. The pathologic processes to be covered including those involved in cellular response to stress, inflammation, tissue repair, circulation and hemodynamics, immunity, cancer, and infectious disease. Translational associations that link pathologic mechanisms with disease manifestations commonly encountered in companion animal veterinary practice will be emphasized and will promote comprehensive bench-to-bedside learning.

VCM 509 Biology of Veterinary Pathogen credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/509/)
Includes an overview of relevant veterinary microbiology and the interaction between microbes and their hosts. The course will build upon knowledge acquired in VCM 507. Students will learn how to identify host defenses and summarize similarities and differences between body systems, identify and explain tissue tropism and disease patterns of different veterinary pathogens, and predict with body systems will be targeted by pathogens. Prerequisite: VCM 505 or VCM 507.

VCM 511 Seminar in Prod/Pop Medicine credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/511/)
Same as PATH 511. See PATH 511.

VCM 513 Science of Health Homeostasis credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/513/)
Individual animals and populations are continually exposed to internal and external hardships and to specific health challenges. To live healthy and productive lives, animals must resist and/or adapt to a wide range of health ordeals and difficulties. This ability or capacity of an individual to adapt to change and challenge is termed homeostasis and is a key concept in the design and implementation of health management strategies. Prerequisite: Students must complete VCM 507 and VCM 509 maintaining a B or better to advance to VCM 513. All students must have a bachelor's degree with a 3.0 GPA or better.

VCM 514 Science of Health Evaluation credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/514/)
Students will apply their pre-existing, foundational knowledge of anatomy, physiology, immunology, microbiology, and pathology in evaluating and solving health failure problems in the major body systems. Participants will learn to ask thoughtful, focused, and purposeful questions when collecting clinical data, and how to use a problem-oriented approach in evaluating health problems, constructing inquiry pathways, and in designing therapeutic and disease management strategies. Prerequisite: Students must complete VCM 507, VCM 509, VCM 513 maintaining a B or better to advance to VCM 514. All students must have a bachelor's degree with a 3.0 GPA or better.

VCM 515 The Dynamics of the Immune System in the Maintenance and Defense of Health credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/515/)
Introducing the immune system functions in health maintenance. The content will train students to consider the role of the immune system in animal responses to various health challenges and prompt them to develop an integrated, science-based approach in solving health problems by applying their knowledge of immune system structure and function in comprehending how the body detects, communicates, regulates, and corrects pathophysiologic perturbations. Prerequisite: VCM 507, VCM 509, DVM or instructor approval.

VCM 517 Imaging Anatomy credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/517/)
Guiding students through clinically relevant anatomy using diagnostic imaging. All body systems are covered in this comprehensive course. The basic principles behind imaging modalities, image acquisition, and radiation safety are covered to encourage learners to consider how tissue structure and function apply to anatomy and the interpretation of diagnostic images.

VCM 522 Adv Comp Theriogenology credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/522/)
Advanced study on the principles and practice of theriogenology in domestic and non-domestic animals. May be repeated to a maximum of 6 hours. Prerequisite: Graduate Veterniarian and consent of instructor.

VCM 524 Effective Biomedical Teacher credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/524/)
Provides current or future university-level biomedical educators with the knowledge, motivation and proficiencies needed to apply the most recent developments in higher education to their teaching. The overall aim of the course is to cultivate an informed, passionate and adventurous approach to teaching and learning in participants. This will be achieved by fostering new thinking about teaching and learning, and by encouraging collaborative and cooperative learning between the class members. May be repeated in separate terms if topics vary.

VCM 527 Bone Marrow Seminar credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/527/)
Bone marrow evaluation is an integral part of pathology training. Integration of the findings from marrow cytology and biopsy along with recent peripheral blood data is needed to make a complete interpretation. In this course, students will review both bone marrow cytology and core biopsy samples from clinical canine and feline patients. May be repeated in separate terms to a maximum of 3 graduate hours. Prerequisite: Graduate veterinarian or instructor approval.

VCM 528 Comparative Veterinary Physiology credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/528/)
This graduate level physiology course covers advanced physiology of all the major organ systems. Enrolled graduate students are assumed to have a knowledge of basic physiology (such as what is obtained during veterinary school). This advanced graduate level course emphasizes the requirements for normal physiology by discussion of pathologies affecting the organ systems. The overall aim is to increase the clinician-scientist-graduate student's merging of physiology into their day to day practice on the clinic floor and research endeavors. 3 graduate hours. 3 professional hours. Prerequisite: Graduate Veterinarian or consent of instructor.

VCM 535 Small Animal Internal Medicine Book Club credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/535/)
Read and review a veterinary medical textbook in preparation for the ACVIM General and Specialty Exams. At each class meeting, we will discuss the material in the assigned chapters. May be repeated in separate semesters up to 6 hours if topics vary. Prerequisite: Restricted to residents in small animal specialties.

VCM 536 ECC Journal Topics credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/536/)
Review and discuss current veterinary literature pertaining to small animal emergency and critical care medicine. Approved for S/U grading only. May be repeated to a maximum of 6 hours. Prerequisite: DVM Degree. Restricted to Vet Med students.

VCM 540 Conservation and Ecosystem Health credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/540/)
Provides professional students and graduate students with an introduction to the use of medical reasoning and technology in the investigation of problems related to conservation biology and ecosystem health. Students will have a variety of lecturers from across the university and some outside speakers in a seminar format use case examples and discussions of current problems. The survey of topics will provide a better understanding of the challenges in ecosystem health and a basis for further in-depth study for their careers. 1 graduate hour. 1 professional hour. Prerequisite: Restricted to Graduate Students, VM1 and VM2 students, or consent of instructor.

VCM 542 Ocular Pathology credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/542/)
Same as PATH 542. See PATH 542.

VCM 547 Global One Health credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/547/)
Students will be exposed through lectures from visiting and invited guests, small group discussions, readings, and projects to various facets and health problems in both public and veterinary health globally with emphasis on low-income countries. Emphasis will be on how to understand and work within the frameworks at the national and international level to address the biggest challenges and coming threats of the health of people and animals. The survey of topics will provide a foundational understanding for further in-depth study and work in international health. Same as BSE 600. 3 graduate hours. 3 professional hours. Approved for Letter and S/U grading. Prerequisite: In good standing as graduate student, DVM or MD student.

VCM 553 Advanced Diagnostic Imaging credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/553/)
Reviews the physics, clinical indications and technical aspects of advanced diagnostic imaging. The course will utilize clinical case examples. Studies are required to prepare one lecture and take a final examination. Attendance at 80% of the classes is required. May be repeated in separate terms for unlimited graduate credit.

VCM 560 Infectious Disease in Livestock Systems credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/560/)
This is an 8-week graduate level course that covers the components and determinants of a healthy livestock system. The course will allow students to understand the interaction between animals (hosts), microorganisms (infectious disease) and the environment. The instructors assume that enrolled students have a foundational knowledge of pathogens and livestock system design and operations. Prerequisite: VCM 505 or VCM 507. Restricted to graduate students with DVM or equivalent.

VCM 561 Biosecurity in Livestock Systems credit: 4 Hours. (https://courses.illinois.edu/schedule/terms/VCM/561/)
This is an 8-week graduate level course that covers the principles of biosecurity. The course will allow students to design a comprehensive protocol for a given site. This course emphasizes how to optimize interventions in swine production systems to minimize the economic impact of infectious disease. The instructors assume that enrolled students have foundational knowledge of pathogens and swine system design and operations. Prerequisite: DVM or equivalent. Restricted to graduate students only.

VCM 562 Understanding the Host Response to Infection credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/562/)
This is an 8-week graduate level course that provides a framework for understanding the anatomical, physiological, immunological, microbiological, and pathological basis of health maintenance in the major body systems impacted by infectious disease. The course will use a case-based approach to train students how to apply the basic principles of health science in solving clinical problems in individual animal and livestock systems. The instructors assume that enrolled students have a foundational knowledge in microbiology and livestock system operations. Prerequisite: Restricted to graduate students.

VCM 564 Introduction to Livestock Business Strategy credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/564/)
This is an 8-week graduate level course designed to provide students with basic business strategy concepts taught in business schools adapted to the livestock production industry. The purpose of this course is to guide learners through a complete analysis of their current business and develop a strategic plan to earn superior returns in the future. The analysis will include the internal and external environment, performance measures, and existing strategies to compete in the livestock industry. On-demand, business concept lectures are given by a business school professor, Professor Peter Foreman. Weekly reality-checks with Dr. Jim Lowe apply the concepts to the livestock industry. Prerequisite: Restricted to graduate students.

VCM 565 Biostatistics, Information Management, and Data Analytics for Livestock Production Systems credit: 4 Hours. (https://courses.illinois.edu/schedule/terms/VCM/565/)
Application of statistical methods to epidemiology, clinical and diagnostic medicine, and laboratory biomedical experiments. Topics include data collection and organization, data cleaning, data visualization, descriptive statistics, reliability, sample size estimation, analysis of group differences, correlation and linear regression. Emphasizes use of computerized statistical software in biomedical data analysis. Prerequisite: Restricted to graduate students.

VCM 566 Applications of Data Science to Livestock Systems credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/566/)
Develops skills in collection, organization, wrangling, dashboarding and advanced analytics of data in animal-based food production systems. The course will focus on building skills through problem assignments which require the integration of skills and knowledge to real world problems. Prerequisite: Restricted to graduate students.

VCM 568 A Systems-Based Approach to the Operation of Livestock-Based Food Production Systems I credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/568/)
Students will explore how structured, systems-based thinking – Thinking Process techniques - can be applied to the operations of livestock production systems. Eli Goldratt's approach to problem solving through his "Theory of Constraints" has been applied in businesses in many industries around the world. In this class you will explore both the theories that Goldratt has developed and how they might be applied to livestock production systems. You will, by the end of the course, be able to apply the TOC to livestock systems to improve both biological and economic performance.

VCM 569 A Systems-Based Approach to the Operation of Livestock-Based Food Production Systems II credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/569/)
In this course you will continue to learn how structured, systems-based thinking – Thinking Process techniques - can be applied to the management of the supply chain for livestock-based food systems. The theories that Goldratt has developed and how they might be applied to supply chain management are explored in this course. You will, by the end of the course, be able to apply the TOC to a livestock-based supply chain to improve economic performance of the entire supply chain. Prerequisite: VCM 568. Restricted to graduate students.

VCM 570 Cattle Feedlot Health Systems credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/570/)
An 8-week graduate level course that covers the different aspects of feeder cattle health and well-being as it relates to management practice, biomedical conditions and treatments. We will focus on understanding the relationships between people and cattle along with evidence-based approaches to ensuring cattle are cared for properly. The animal health and well-being aspects of disease mechanisms will be taught at the individual and population level. The course is designed to around recognizing the clinical signs (individual and population) you will see throughout your career and how to remedy these animal health problems efficiently. Prerequisite: Restricted to students enrolled in the MVS degree program.

VCM 572 Clinical Epidemiology credit: 4 Hours. (https://courses.illinois.edu/schedule/terms/VCM/572/)
Reviews the common epidemiologic and statistical methods used to design studies, analyze data, and interpret diagnostic tests and research findings. 4 graduate hours.

VCM 577 Advanced Large Animal Medicine credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/577/)
A seminar series devoted to intense study of pathophysiologic and current therapeutic aspects of selected topics in large animal internal medicine. May be repeated to a maximum of 6 hours. Prerequisite: Graduate Veterinarian or consent of instructor.

VCM 581 Emergency Diagnostic Imaging credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/581/)
Provides graduate students in emergency medicine, small animal surgery and diagnostic imaging the opportunity to share principles of diagnostic imaging based on recent case examples. Students will be expected to present at least two cases demonstrating competence in reviewing radiographic findings, formulating a list of differential diagnoses and discussing additional imaging modalities, as appropriate. 1 graduate hour. May be repeated in separate terms to a maximum of 9 graduate hours.

VCM 584 Current Concepts Comp Surgery credit: 1 or 2 Hours. (https://courses.illinois.edu/schedule/terms/VCM/584/)
Advanced study of topics concerning the pathophysiology, diagnosis, and current therapy of diseases which are treated with surgical procedures. May be repeated to a maximum of 6 hours. Prerequisite: Graduate Veterinarian or consent of instructor.

VCM 585 Current Lit Sm Anim Medicine credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/585/)
Participants will discuss and analyze current veterinary journal articles which pertain to small animal internal medicine. May be repeated to a maximum of 6 hours. Prerequisite: Graduate Veterinarian.

VCM 590 Seminar credit: 0 to 1 Hours. (https://courses.illinois.edu/schedule/terms/VCM/590/)
Required of all graduate students whose major is Veterinary Clinical Medicine. Approved for S/U grading. May be repeated.

VCM 591 Advances in Vet Internal Med credit: 0 or 1 Hours. (https://courses.illinois.edu/schedule/terms/VCM/591/)
A series of lectures, seminars, and discussions devoted to intense study of new pathophysiologic aspects of selected topics in veterinary internal medicine. Each term is devoted to three topics. Approved for letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Graduate Veterinarian and consent of instructor.

VCM 592 Special Problems credit: 1 to 4 Hours. (https://courses.illinois.edu/schedule/terms/VCM/592/)
Basic and applied study including orientation and research on pertinent initial and continuing problems in the student's area of interest. May be repeated. Prerequisite: Consent of instructor.

VCM 593 Adv Topics Vet Clin Med credit: 1 to 4 Hours. (https://courses.illinois.edu/schedule/terms/VCM/593/)
Instruction in advanced diagnosis, therapeutic modalities, and research methodologies in the areas of small animal internal medicine, small animal surgery, equine and food animal medicine and surgery, ophthalmology, theriogenology, radiology, and clinical pharmacology. May be repeated to a maximum of 8 hours. Prerequisite: Graduate Veterinarian and consent of instructor.

VCM 594 Applied Veterinary Science Capstone credit: 4 Hours. (https://courses.illinois.edu/schedule/terms/VCM/594/)
Culminating the knowledge and skills acquired throughout the degree into an applied veterinary science capstone project. Students will draw upon their creativity for innovation, integrating theory, practical experience, research, data collection, analytic skills, and critical thinking into solving a real-world problem. 4 graduate hours. No professional credit.

VCM 595 MVS Integrative Learning Experience credit: 1 to 8 Hours. (https://courses.illinois.edu/schedule/terms/VCM/595/)
The Master of Veterinary Science (MVS) Integrative Learning Experience provides students with an opportunity to synthesize, integrate, and apply knowledge and skills acquired in MVS approved coursework. Students will work on a comprehensive project simulating an experience in a professional setting. The capstone project must integrate theory and practical experience, draw upon students' originality and creativity within appropriate scope, and stretch their research, analytical, writing, critical thinking, and other intellectual abilities. Course registration is restricted to MVS degree seeking students and requires approval from the instructor. The comprehensive capstone project will take a year to complete requiring students to register for this course the last two semesters of the degree program. Approved for S/U grading only. May be repeated up to 8 hours. Prerequisite: Course registration is restricted to MVS degree seeking students and requires approval from the instructor.

VCM 598 Manuscript Research credit: 0 to 12 Hours. (https://courses.illinois.edu/schedule/terms/VCM/598/)
Independent research to fulfill requirement for non-thesis alternative in Master of Science Program. Credit is not given for both VCM 598 and VCM 599. (Summer Session, 1 to 2 hours.) Prerequisite: Must be enrolled in the departmental graduate program.

VCM 599 Thesis Research credit: 0 to 12 Hours. (https://courses.illinois.edu/schedule/terms/VCM/599/)
Approved for S/U grading only. May be repeated in the same term or in separate terms.

VCM 608 Equine Veterinary Husbandry credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/608/)
Designed to familiarize veterinary students with the basic principles of equine husbandry, including biosecurity, infectious disease prevention, anti-parasite programs, dental care, transport, and nutrition. Approved for both letter and S/U grading. Prerequisite: Good standing in the veterinary professional curriculum, Graduate College, or consent of instructor.

VCM 614 Equine Farrier Science Form and Function credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/614/)
Designed to familiarize veterinary students with the basic principles of equine farriery including anatomic considerations, infectious disease prevention, the effect of transport, and nutrition. 1 professional hour. Approved for S/U grading only. Prerequisite: Restricted to VM2 or VM3 student in good standing.

VCM 625 Zoological Companion Mammal Medicine credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/625/)
Zoological Companion Mammal Medicine is an elective course for veterinary students in their third year of the veterinary curriculum or graduate students. Students will learn clinical aspects of comparative anatomy, physiology, husbandry and handling of zoological companion mammal species encountered in companion zoological practice including rodents (Guinea Pigs, rats, hamsters, chinchillas), lagomorph (domestic rabbit), marsupials (sugar glider), carnivores (ferret), and more (African pygmy hedgehogs). The most commonly encountered diseases of these species will also be discussed. 1 graduate hour. 1 professional hour. Approved for Letter and S/U grading. Prerequisite: Enrollment in the 3rd year veterinary curriculum.

VCM 626 Shelter Medicine I credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/626/)
Introduction to the field of Shelter Animal Medicine and is intended to create a pool of well-informed veterinarians that will become an important resource for shelter managers nationwide. This course is a prerequisite for the more advanced Shelter Medicine II (offered in the third year). Course will foster veterinarian participation in community service and encourage personal responsibility in the area of animal welfare. Offered for S/U grading only.

VCM 627 Equine Infectious Disease credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/627/)
Provides an in-depth review of common equine infectious diseases (viral, bacterial, parasitic) according to body systems. Primarily uses a lecture-based format to review the key aspects of disease pathogenesis, common clinical signs and most appropriate diagnostic test(s) for pathogen identification. Lectures are followed by several (3-4) cases that the lecturer will review in class with the students. These cases will be designed to emphasize the essential aspects of the different infectious diseases and generate critical thinking by the students with regards to developing an appropriate diagnostic plan. Approved for S/U grading only.

VCM 628 The Healer's Art credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/628/)
Creates time and space for veterinary medicine professional students to reflect and remember what it was that brought them to this field and why they want to do this work. The course provides a safe place for students to explore their feelings, passions, struggles, and aspirations with other classmates and faculty members. This is a class focused on giving students tools to build resiliency and foster self-awareness and growth. By addressing topics such as self-confidence and interpersonal relationships during veterinary school, this course gives students the opportunity to learn how to cope with some of the challenges as they occur to combat compassion fatigue, burnout, and overall job dissatisfaction. 1 professional hour. Approved for S/U grading only. Prerequisite: Restricted to students with good standing in the College of Veterinary Medicine.

VCM 630 Introduction to Medication Counseling credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/630/)
Intended to teach veterinarians how to counsel clients on preparing and administering medications as prescribed. Clients must also be aware of potential adverse effects and what they can expect to see (if anything) that will indicate the medication is working as intended. This 8-week course provides veterinary students with practice for communicating medication information to clients in a manner that will encourage compliance with the prescribed regimen. This course utilizes interactive activities to teach medication counseling techniques as well as reinforce basic points about commonly dispensed medications. 1 professional hour. Approved for S/U grading only. Prerequisite: VM 605. Restricted to veterinary students in good standing.

VCM 635 Advanced Soft Tissue Surgery credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/635/)
Seven-week course during the second half of the Fall semester focusing on the theory and practice of small animal soft tissue surgery. This course covers many of the soft tissue surgical procedures which new veterinary graduates are expected to competently perform. Procedures to be covered include bandaging and wound management, drain placement, declaw, dewclaw removal, tendonectomy, aural hematoma repair, pinna repairs, biopsies, surgery of the integument, gastrointestinal surgery, limb amputations and mastectomy. Approved for S/U grading only. Prerequisites: VM 605, VM 606, VM 607 and VM 608.

VCM 636 Advanced Clinical Pathology credit: 2 Hours. (https://courses.illinois.edu/schedule/terms/VCM/636/)
A case-based approach to clinical pathology. Students are required to critically evaluate clinical case data, turn in a written description of the case and be a discussion leader for at least one class period. Students will be provided with basic history and signalment of cases and with laboratory data including CBC, clinical chemistry, urinalysis and occasionally additional data. Focuses on the dog and cat, however horse and food animal cases will be presented. 2 professional hours. Approved for S/U grading only. Prerequisite: Successful completion of VM 608 or permission of instructor. Third year veterinary students only.

VCM 637 Advanced Clinical Cardiology credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/637/)
This course is designed to familiarize veterinary students with advanced veterinary cardiology, from history and physical examination findings to diagnostics and treatments. Lectures will be based on clinical cases assigned prior to class and case-based discussions. This is an interactive course and each student will be expected to answer questions regarding problem and differential lists, as well as diagnostic interpretation and treatment plans. 1 professional hour. Approved for S/U grading only. none Prerequisite: VM 609. Restricted to VM3 veterinary students.

VCM 640 Advanced Orthopedic Surgery credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/640/)
This course will provide hands-on training in fracture fixation and common knee and hip procedures to veterinary students with an interest in orthopedic surgery. This hands-on training is not available in the core course. Approved for S/U grading only. Prerequisite: Third year standing in the veterinary curriculum.

VCM 641 Equine Neonatology credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/641/)
Designed to familiarize the veterinary student with the basic and advanced principles of equine neonatology. Topics include normal and abnormal physiology, problems of the mare that impact the foal, prematurity, sepsis, uremia, musculoskeletal problems, and therapy. 1 graduate hour. 1 professional hour. Approved for letter and S/U grading. Prerequisite: VM 606.

VCM 643 Equine Emergency Medicine credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/643/)
Familiarizes the veterinary student with the basic and advanced principles of emergency care for adult horses. Topics include gastrointestinal, musculoskeletal, respiratory, central nervous system, ophthalmic, and urogenital emergency problems of the horse. Particular attention will be paid to gastrointestinal disease of the horse that present as an emergency, such as colic, enteritis, and typhlocolitis. 1 graduate hour. 1 professional hour. Approved for letter and S/U grading. Prerequisite: VM 606.

VCM 644 Veterinary Pain Management credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/644/)
This course will serve to increase a student's knowledge base on many aspects of pain management of the veterinary patient. Subjects covered in this course will include in depth review of neuroanatomy and physiology of pain, pathophysiology of pain, pharmacology of medications used for pain management, non-pharmacologic treatments for pain, and specific pain management strategies for various domestic species, and exotic and zoo animals. 1 professional hour. Approved for S/U grading only. Prerequisite: For students in the veterinary professional program only.

VCM 645 Equine Surgery Laboratory credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/645/)
Provides introductory laboratory experiences in common and basic equine surgical techniques. Topics include normal and cryptorchid equine castration, distal limb surgeries, casting techniques, and joint injections. Approved for S/U grading only. Prerequisite: VM 606.

VCM 646 Lab Animal Science I credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/646/)
Addresses fundamental issues in Laboratory Animal Sciences including career options, occupational health and safety, regulations, animal welfare, IACUC review, and rodent biology, husbandry, and medicine. 1 graduate hour. 1 professional hour. Approved for Letter and S/U grading. Prerequisite: Second or third-year standing in the veterinary medicine curriculum, registration in the graduate college, or consent of instructor.

VCM 648 One Medicine: One Health credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/648/)
Explores the interrelatedness of human, animal, and environmental health with a focus on policy development. Through a combination of lecture, class discussion, and small group papers, students will learn how human, animal, and ecosystem health are all affected by many of the same factors and how the health of one affects the health of the others. Students will examine topics such as emerging and infectious diseases; overweight/obesity; food and water security; public health law; climate change; and antimicrobial resistance. 3 graduate hours. 3 professional hours. Approved for Letter and S/U grading. Prerequisite: Restricted to first, second, or third year standing in the veterinary medicine curriculum, registration in the graduate college, or consent of the instructor.

VCM 649 Avian Medicine and Surgery credit: 2 Hours. (https://courses.illinois.edu/schedule/terms/VCM/649/)
Avian species represent a significant segment of the companion animal population. Their anatomy, physiology, and behavior are substantially different from traditional species. Intended to provide students with the knowledge and skills required a practice clinical avian medicine and surgery. Diagnostic and therapeutic principles, as well as diseases of companion avian species are included. 2 graduate hours. 2 professional hours. Approved for letter and S/U grading.

VCM 656 Lab Animal Science II credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/656/)
Continuation of VCM 646. Additional topics in laboratory animal medicine including the management of spontaneously and experimentally induced diseases and conditions, management of pain and distress, research, animal care, regulatory responsibilities, and education. 1 graduate hour. 1 professional hour. Approved for Letter and S/U grading. Prerequisite: VCM 646 or equivalent, or consent of instructor.

VCM 657 Shelter Medicine II credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/657/)
Shelter Medicine is a broad discipline within veterinary medicine that requires a thorough knowledge of population medicine, surgery, epidemiology, preventive medicine, infectious disease control, policy development, facility design, public health, animal behavior, and veterinary forensics. This course will discuss select topics within Shelter Medicine to give the student a better understanding of the discipline. 1 professional hour. Approved for S/U grading only. Prerequisite: VCM 626.

VCM 660 Advanced Equine Anatomy credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/660/)
Designed to provide an in-depth assessment of the unique anatomical characteristics of the horse with focused attention to clinically important aspects of equine anatomy. The material will cover the anatomy of the head, larynx and pharynx, gastrointestinal anatomy and function, and musculoskeletal anatomy in particular detail, relating equine anatomy to the diagnostic and surgical approaches used in the management of diseases involving these body systems. Prerequisite: VM 604.

VCM 661 Advanced Equine Lameness credit: 2 Hours. (https://courses.illinois.edu/schedule/terms/VCM/661/)
Covers equine lameness from a clinician's perspective. Offers an in-depth integrative approach to the diagnosis of equine lameness using the presenting complaint as a starting point. Rather than approaching equine musculoskeletal disease from the perspective of specific injuries, students will be guided through the lameness examination process. Active student participation in class discussion is expected. 2 professional hours. May not be repeated for credit. Prerequisite: Third year veterinary student.

VCM 663 Small Animal Dermatology credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/663/)
First half of the course presents a systematic approach to small animal dermatologic diagnoses and therapeutics; the second half deals with immunological disorders, seborrheic syndromes, hereditary disorders, cutaneous neoplasms, and feline dermatology. 1 professional hour. Approved for S/U grading only.

VCM 667 Ethics and Conflict in Zoological Medicine credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/667/)
Provides students with an analytical framework and critical thinking tools to better understand both sides of charismatic and hotly debated issues in Zoological Medicine. An emphasis will be placed on the broader social contexts and the influence of the media on the public perception of these issues. By building these tools early in their career, students will be equipped to better understand and critique arguments for future issues as they develop. Course topics will include maintenance of zoological species as companion animals, management of zoological species in an institution, zoo animal advocacy, intervention of free ranging wildlife, and how a zoo veterinarian is portrayed in public platforms. 1 professional hour. Approved for S/U grading only. Prerequisite: Restricted to VM1 or VM2 students.

VCM 672 Food Supply Disease Prevention credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/672/)
This course is designed to familiarize the student with the basic principles of food supply disease control. The first half of the course is designed to enhance the student's ability to detect disease with observation of necropsy lesions at the gross level. The second half of the course will cover immunizations and the judicious use of antimicrobials. 1 graduate hour. 1 professional hour. Prerequisites: VCM 690 or permission of the instructor if a graduate student or house officer.

VCM 673 Companion Animal Rehab credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/673/)
Series of lectures/discussions focusing on the proper application of companion animal rehabilitation modalities. Designed to give an understanding of the basics of rehabilitation and begin the thought process of implementing rehabilitation in to veterinary medicine. Prerequisite: Registration in the veterinary curriculum or consent of the instructor.

VCM 674 Equine Exercise Physiology credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/674/)
Designed to familiarize veterinary students with the basic principles of equine exercise, physiology and sports medicine. Topics include physiology, energetics, thermoregulation, fatigue, conventional and alternate training techniques, and drugs and medications used in equine athletes. Approved for letter and S/U grading. Prerequisite: Good standing in the veterinary professional curriculum, Graduate College, or consent of instructor.

VCM 678 Reptile Medicine & Surgery credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/678/)
Available to VM3 students and will provide exposure to important topics including husbandry, restraint, venipuncture, physical examination, triage, radiography, zoonoses and clinical medicine. Species breadth will include those found under human management with some topics explored surrounding wildlife. Content will be delivered in a hybrid format with both online and in person content, including hands on learning activities. 1 professional hour. Approved for Letter and S/U grading. Prerequisite: 3rd year VM Students.

VCM 679 Adv Veterinary Ophthalmology credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/679/)
Anatomic, physiologic, pathologic, and pharmacologic considerations in eye diseases and their treatments; instrumentation and methods of study of ocular structure, physiology, and diseases; and laboratories devoted to techniques of examination of the eye and surgical procedures used in treatment of eye diseases. 1 professional hour. Approved for S/U grading only. Prerequisite: Third-year standing in veterinary medicine curriculum.

VCM 681 Advanced Equine Internal Medicine credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/681/)
Advanced instruction in case management, laboratory data interpretation, decision-making regarding therapeutics, and advanced diagnostic techniques. 1 professional hour. Approved for Letter and S/U grading. none Prerequisite: Consent of instructor. Available to VM3 students only.

VCM 682 Wildlife Medicine credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/682/)
An 8-week elective course for veterinary students offered in their second or third year of the veterinary curriculum. Participation in weekly rounds and team meetings, for the purpose of independent study and training, is required. Students will be required to create a blog style report of an interesting case managed by the student's WMC team or a topic that relates to wildlife medicine, rehabilitation, or conservation. Available to VM2 students during the first 8-week terms of the fall term. Available to VM3 students during the first 8-week terms of the spring term. 1 professional hour. Approved for Letter and S/U grading. May be repeated in separate terms to a maximum of 2 hours. Prerequisite: Enrolled students must be an active member assigned to a treatment team in the Wildlife Medical Clinic.

VCM 685 Advanced Diagnostic Imaging credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/685/)
Stresses imaging principles and comparative anatomy, using clinical cases as examples for echocardiography, diagnostic ultrasound, nuclear medicine, CT and MRI. Prerequisite: First, second or third year veterinary students or by consent of instructor.

VCM 686 ZooMed: What is Your Diagnosis credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/686/)
A series of interactive, non-domestic animal cases will be discusses during each meeting. Expands a veterinary student's confidence and diagnostic skill when working with these species. 1 professional hour. Approved for Letter and S/U grading.

VCM 687 Canine Occupational Health I credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/687/)
This course will address the most common occupations for working and performance dogs and how these occupational activities may impact health. Subjects covered in this course will include handling of working dogs, breed predisposition to disease, equipment and its proper use, nutrition, rehabilitation and physical therapy, pain management, alternative therapies and prevention strategies in managing occupation-related illnesses in working and performance dogs. The course will be presented in lecture format. 1 professional hour. Prerequisite: First, Second or Third year standing in the DVM curriculum or permission of instructor.

VCM 688 Food Supply Disease Management credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/688/)
This course is designed to familiarize the veterinary student with the principles of disease management of the major body systems in herd situations. The student will be given case examples and opportunities to evaluate and treat diseases of the respiratory and enteric systems as well as multiple periparturient diseases. 1 graduate hour. 1 professional hour. Approved for letter and S/U grading. Prerequisite: VCM 672 or permission of the instructor if a graduate student or house officer. Class Scheduled Information: DVM graduate students or house officers in food animal related training programs.

VCM 690 Intro to Food Supply Medicine credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/690/)
This course is designed to familiarize the student with the basic principles of food supply veterinary medicine. Topics include epidemiologic investigation, veterinary inputs into food supply systems, reproductive aspects associated with production systems and therapeutic standards in food production. 1 graduate hour. 1 professional hour. Approved for letter and S/U grading. Prerequisite: VM 601 or permission of the instructor.

VCM 692 Special Problems credit: 1 to 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/692/)
Individual research on a special problem chosen in consultation with the instructor and department head. 1 to 3 graduate hours. 1 to 3 professional hours. Approved for letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Enrollment in veterinary medicine curriculum with grade point average of 3.0 or above, or consent of instructor.

VCM 693 Comparative Anatomy - Zoo credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/693/)
The comparative anatomy of zoological species commonly encountered in clinical practice will be discusses in lecture format followed by laboratory dissection of cadavers. Additionally, radiographic anatomy of these species will be discussed. Species covered include representatives of the taxonomic Classes Chondrichthyes, Osteichthyes, Amphibia, Reptilia, Aves, Mammalia. Cadaver specimens include bony fish, sharks, frogs, iguana, turtles, snakes, birds (pigeons), rats and rabbits. Emphasis will be placed on anatomical differences as related to domestic species. Meets for one hour of lecture and two hours of laboratory, one or two times each week during the eight weeks of the course for a total of eight lecture hours and 16 laboratory hours. Approved for S/U grading only.

VCM 694 Veterinary Clinical Medicine credit: 1 to 3 Hours. (https://courses.illinois.edu/schedule/terms/VCM/694/)
To be used to designate a trial or experimental course for five or more students, designed to be an elective in the CVM professional curriculum. The course can be taught under this designation for two years or two offerings, whichever time is greater. 1 to 3 graduate hours. 1 to 3 professional hours. Approved for letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Registration in the veterinary medicine curriculum or consent of instructor.

VCM 695 Food Supply Decision Making credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/695/)
This course is designed to enhance veterinary student knowledge of case management and allow them to utilize case information to make decisions. The course will be laboratory and problem based with the opportunity to use antemortem and postmortem samples of animals with disease to evaluate therapeutic and management outcomes. 1 professional hour. Approved for S/U grading only. Prerequisite: VCM 688.

VCM 696 Fish Medicine and Surgery credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/696/)
Introduction to ornamental fish medicine and surgery. Specific topics to be addressed in this course include non-infectious and infectious diseases, diagnostic sampling techniques, anesthesia and analgesia, and common surgical procedures for fish. 1 graduate hour. 1 professional hour. Approved for letter and S/U grading.

VCM 698 Adv Small Animal Dentistry credit: 1 Hour. (https://courses.illinois.edu/schedule/terms/VCM/698/)
The recognition and appropriate treatment of various types of feline and canine dental diseases will be discussed. The laboratories will be utilized to assist students in the determination of the appropriate diagnosis based on dental radiographs, photographs and models. Oral surgery, periodontic and endodontic therapy will also be performed in the laboratory. 1 graduate hour. 1 professional hour. Approved for S/U grading only.