

Veterinary Medicine- Companion Animal & Sp Species (VMC)

VMC 900 Advanced Equine Medicine (1 credit hours)

This course will build upon topics covered in VMC 952 Equine Medicine and Surgery. Lectures will cover equine medical problems in more depth than in the previous course. Additional topics will also be included. This course is designed for students who plan to practice equine medicine after graduation.

Typically offered in Spring only

VMC 901 Advanced Small Animal Medicine (2 credit hours)

This course provides more advanced instruction on medical and surgical diseases of dogs and cats. Pathophysiology, diagnostic evaluation and medical and surgical management of diseases in nephrology, urology, oncology, respiratory medicine, infectious diseases, gastroenterology, cardiology and endocrinology are contained within this course. This advanced content of this course is designed to run alongside the content in VMC 951.

Typically offered in Fall only

VMC 902 Small Animal Rounds (1 credit hours)

Course incorporates weekly rounds on actual cases in the NCSU-CVM. Students will practice clinical reasoning, test interpretation and oral and written case presentations in a low stakes, safe environment. Real cases will provide a comprehensive application of the pre-clinical courses. Weekly repetition of these skills will prepare students for clinical practice.

Typically offered in Spring only

VMC 903 Advanced Equine Podiatry, Surgery and Lameness (1 credit hours)

This course combines in-person lectures, a hands-on podiatry lab (at Reedy Creek Facility), and small group presentations by students to provide equine-interested third year students with highly relevant information in the area of surgery, lameness and podiatry. The lectures cover selected podiatry, surgery and orthopedic/lameness topics while the out-of-classroom experience will focus on podiatry. During this lab, students will perform podiatry examinations in small groups on horses at the Reedy Creek Equine Farm. A few weeks later, the same groups will present their exam findings, together with future trimming/shoeing recommendations, in short powerpoint presentations to the class. Instructors in this course include specialists in the area of podiatry, imaging, sports medicine and rehabilitation, orthopedic and soft tissue surgery and an experienced farrier, who will participate in the lab, lectures and provide feedback in the student presentations.

Typically offered in Fall only

VMC 904 Advanced Equine Theriogenology (1 credit hours)

This course provides more advanced instruction in equine Theriogenology (mare and stallion). Diagnostic evaluation and techniques, with expansion on basic core concepts introduced in previous course content are contained within this course.

Typically offered in Fall and Spring

VMC 905 Advanced Topics in Small Animal Dermatology (1 credit hours)

This course will provide broad understanding of small animal dermatology by building upon the basic foundation principles covered in VMC 951. Students will learn to recognize, diagnose and treat both common and uncommon skin diseases of small animals.

Typically offered in Spring only

VMC 906 Equine Field Skills Elective (2 credit hours)

This course will provide practical instruction in commonly used skills and techniques necessary for equine primary care practice. It is an intensive, team taught series of individual laboratories that provide students with experience in the varied skill set required of an equine general practitioner. This course is designed for students that are in the third year of the DVM curriculum, have good horse handling skills and a desire to practice equine veterinary medicine upon graduation. Registration for this course is by instructor permission only.

Typically offered in Spring only

VMC 907 Small Animal Comfort Crew (1 credit hours)

This course is an introduction to patient care in the Terry Center. Students will receive instruction on low stress dog and cat handling, hospital protocols in the general wards, intermediate care unit (IMC) and intensive care unit (ICU), and topics such as the transplant program, management of postoperative patients, and student elected topics based on patients they have cared for. Students will play an active role in improving in hospital patient care through hands on comfort sessions with in patients.

R: DVM Students Only

Typically offered in Fall and Spring

VMC 908 Advanced Small Animal Neurology, Ophthalmology, and Orthopedics (2 credit hours)

This course will provide a more advanced approach to the medical and surgical management of selected metabolic, neoplastic, nutritional, immune mediated, developmental and degenerative diseases and traumatic injury of the ophthalmologic, neurologic, and musculoskeletal systems of small animals. It is a companion course to material given in VMC961. Concurrent enrollment in third year of DVM curriculum.

Typically offered in Spring only

VMC 909 Feline Medicine (1 credit hours)

This course will equip students for success in feline practice or in small animal or mixed practice with a feline component. The course will address the basic behavioral and nutritional needs of cats, and students will learn how the unique physiology of this species affects feline health and feline disease management.

Typically offered in Spring only

VMC 910 Careers in Veterinary Medicine (1 credit hours)

Specialists and invited speakers from multiple areas of veterinary medicine will present information about career opportunities.

Typically offered in Fall only

VMC 912 Introduction to Zoological and Laboratory Animal Medicine 1 (2 credit hours)

This course will cover introductory husbandry, nutrition and medicine for animals commonly kept as zoological companion animals (exotic pets), or housed in laboratory, zoological or aquarium facilities. This course will provide an introduction to the care of these animals as well as introduction into the potential careers involving these animals.

Typically offered in Fall only

VMC 914 Group Communication in Veterinary Medicine (1 credit hours)

This course explores how to effectively communicate in small groups in a professional veterinary context. Students will develop verbal and nonverbal communication skills, an understanding of task/process balance, meeting management and facilitation techniques, and communication styles and strategies for dealing with challenging group situations and conflict management. Examples and cases from veterinary medicine will guide application of group communication in context. Course limited to students enrolled in the DVM curriculum.

Typically offered in Fall only

VMC 919 Clinical Behavior and Welfare for Dogs and Cats Elective (1 credit hours)

This is a one-credit course in clinical veterinary behavioral medicine and welfare, with an emphasis on diagnosis and treatment of behavior problems of dogs and cats. The course will build upon the foundation of normal versus abnormal behavior and learning theory of VMC 927. This course will focus on the recognition of common problem behaviors in dogs and cats and how to approach a behavior problem with a systematic Problem Oriented Approach (POVMR). The presentation, proposed etiology and pathogenesis, differential diagnosis, and plan formulation-including diagnostic, treatment, and education plans, will be discussed for common problems. Behavioral medication and complementary products will be included when discussing treatment plans. Additionally, the impact on animal welfare and the human-animal bond will be discussed. Problems to be reviewed include noise aversion, separation anxiety, compulsive disorders, housoiling, fear and anxiety related problems, problems presenting with aggression, cognitive dysfunction, and some nuisance behaviors.

Prerequisite: VMC 927 or equivalent

Typically offered in Fall only

VMC 921 Special Topics in Zoological Medicine (1-3 credit hours)

This elective course allows students to participate in customized laboratory and field experiences in zoological medicine (avian, aquatic, reptile, amphibian, invertebrate, and mammalian species). This course is designed to be adapted to the needs of students in the DVM program who desire practical experiences in the discipline. Specific details of individual projects are developed by the course coordinator and participating faculty. This elective course can provide partial fulfillment for elective credit for Zoo Focus Area

Prerequisite: 1st, 2nd, or 3rd year DVM student

Typically offered in Fall and Spring

VMC 922 Veterinary Acupuncture (2 credit hours)

This elective course will introduce DVM students to Traditional Chinese Veterinary Medicine (TCVM), including acupuncture, moxibustion, and related therapies. The course will include an overview of TCVM history, terminology, theory, and practical applications using equine (horse or donkey) and canine species. The course will consist of online classes to be completed prior to the laboratory portion (Sessions 1 and 2 through Chi University) and in person laboratories on canine or equine patients over a 2 day laboratory intensive session.

Prerequisite: VMB 911 and VMB 921; Corequisite: Current enrollment in the DVM program

Typically offered in Spring only

VMC 923 Research in Zoological Health (1-4 credit hours)

This course provides an opportunity to pursue mentored research projects relevant to zoological health while in the DVM curriculum. Projects may be but are not limited to those related to the zoological focus thesis option.

Restriction: DVM student status. By Instructor Permission only.

Typically offered in Fall and Spring

VMC 924 Equatorial Zoology and Medicine In Galápagos (1 credit hours)

This unique opportunity will allow DVM students to experience a unique, equatorial archipelago and much of its natural history offerings. The Galápagos Science Center (GSC) will serve as the base of operations. Dr. Gregory Lewbart, who has worked at the facility four separate times, will be the local program leader and guide. He will be assisted by local and visiting scientists. Lectures, laboratory sessions, and field trips will cover a wide variety of zoological and medical topics dealing with native invertebrates, fishes, reptiles, birds, and mammals. There will be an emphasis on aquatic species and a paper is required.

Typically offered in Spring only

Offered in Even Years

VMC 927 Introduction to Companion Animal Behavior (2 credit hours)

This course explores the behavior of companion animals from a veterinary perspective. An emphasis is placed on behavior as an indicator of welfare and health, humane handling of animals, prevention of behavior problems, and treatment of common behavior problems. In addition the nature of human-animal bond and ethical issues relating to human-animal interactions will be discussed. Students will learn how to diagnose and treat common behavior problems on the basis of video-rich case presentations, lecture material, and class discussion. This course is restricted to students enrolled in the DVM Curriculum.

Doctor of Veterinary Medicine Majors Only

Typically offered in Spring only

VMC 928 Topics in Wild Reptile Medicine (1 credit hours)

The NCSU-CVM Turtle Rescue Team treats sick and injured wild reptiles (mostly turtles) belonging to over a dozen different species. First, second, and third year veterinary students taking this course will be responsible for case management, coordinating consultations, diagnostic testing within the hospital, and placing recuperating animals with local wildlife rehabilitators. Students are also required to attend periodic rounds and attend eight lectures about amphibians and/or reptiles, separate from the core and Selective curriculum.

Typically offered in Spring only

VMC 929 Topics in Wild and Managed Carnivore Medicine and Management (1 credit hours)

This course introduces students to wild carnivore medicine, surgery, husbandry, natural history, and captive management issues. Emphasis will be placed on learning the following skills in a clinical and didactic setting: capture and handling, physical examination, complying with and contributing to Species Survival Plan (SSP) guidelines and recommendations, husbandry management, diagnostic sample collection and treatment techniques. During the school year, students will also be expected to attend a minimum of three lectures/seminars related to carnivore medicine (these do not have to be at the CVM but must be in addition to the core or Selective curriculum) in addition to a minimum of one red wolf immobilization (one per semester - date TBA). Students will also be required to attend clinical rounds when appropriate and may be asked to present a case or cases at one of these rounds.

Typically offered in Fall only

VMC 930 Rehabilitation and Mobility Clinical Rotation (2 credit hours)

In this course, students will gain a general understanding of veterinary rehabilitation therapy, including principles and protocols of assessment and treatment, tissue healing, the theory and application of treatment modalities and the common conditions treated.

Requisite: Currently enrolled DVM student

Typically offered in Fall and Spring

VMC 932 Principles of Surgery (3 credit hours)

This course covers the science, art and craft of surgery, as a foundation for clinical applications. The principles you learn will give you a foundation for performing surgery on all species, even though the examples in this course are centered on the dog and cat.

Prerequisite: 2nd year DVM student

Typically offered in Fall only

VMC 933 Theriogenology (2 credit hours)

The physiology, endocrinology, and pathology of the reproductive system are presented. Emphasis includes genital anatomy and function, endocrine interrelationships, and methods for examination of mammary gland and reproductive tract function, including diagnosis and treatment of clinical disorders.

Typically offered in Fall only

VMC 934 Zoological and Laboratory Animal Medicine (2 credit hours)

This course will cover introductory husbandry, nutrition and medicine for animals commonly kept as zoological companion animals (exotic pets), or housed in laboratory, zoological or aquarium facilities. This course will provide an introduction to the care of these animals as well as cover introductory medical techniques and procedures.

Typically offered in Spring only

VMC 937 Introduction to Physical Examination Skills- Small Animal (1 credit hours)

Introduction to physical examination, laboratory sample collection, and medication administration skills in dogs and cats. Students will also be taught how to understand and use the problem oriented approach for patient management. Students must be enrolled in the Doctor of Veterinary Medicine program. Enrollment in year 2 of Doctor of Veterinary Medicine Program.

Typically offered in Spring only

VMC 938 Advanced Small Animal Primary Care (2 credit hours)

Advanced exposure of clinical year veterinary students to a small animal primary care veterinary practice. There will be several areas of focus to increase efficiency and/or enhancement of pre-existing abilities: clinical skills relevant to a primary care veterinary practitioner; strong problem solving abilities; strong communication skills necessary to interact effectively with clients, colleagues and staff; incorporating and conducting behavioral evaluations of pets during wellness examinations. Enrollment in this course is limited to students in the DVM professional program that have passed VMC 939 (Small Animal Primary Care).

Prerequisite: VMC 939

Typically offered in Spring only

VMC 939 Small Animal Primary Care (2 credit hours)

This rotation is designed to immerse fourth year veterinary students in a primary care small animal veterinary practice experience. There will be several areas of focus: teaching clinical skills relevant to a small animal veterinary practitioner, developing strong communication skills necessary to interact effectively with clients, colleagues and staff, incorporating and strengthening behavioral evaluations of pets during wellness examinations and developing strong problem solving abilities. Enrollment in this course is limited to students in the DVM professional program.

Typically offered in Fall, Spring, and Summer

VMC 940 Clinical Theriogenology (2 credit hours)

This course is designed to instruct veterinary students to make clinical diagnoses and problems of the reproduction system of domestic animals. Instruction is provided on medical and surgical correction of clinical reproductive system problems, such as infertility, obstetrical procedures, assisted reproductive techniques, and traumatic injuries. Must be enrolled in fourth year clinical rotations.

Typically offered in Fall and Spring

VMC 941 Special Topics in Theriogenology (2 credit hours)

The primary objective of this course is to provide additional information and training to veterinary students that have taken the VMP 980 (VMC 940 new course #) clinical theriogenology senior clinical rotation. Emphasis will be directed to acquaint students with modern and current practices of clinical Theriogenology. It is expected that the majority of the information and activities offered in this course will involve equine species (80%) and, to a lesser extent, canine (10%) and bovine species (10%). Requires satisfactory completion of 3rd year of professional program and clinical theriogenology senior rotations.

Typically offered in Fall and Spring

VMC 942 Principles of Medicine (2 credit hours)

This cross-species course provides an introduction to the principles of disease and injury state common to all species. Content in this course is intended to prepare the students for third year DVM medicine and surgery courses.

Typically offered in Spring only

VMC 943 Laboratory Animal and Zoological Species Health and Disease I (1 credit hours)

Principles of applied biology, management, physical examination, and medical techniques, health problems and medical treatment of laboratory and companion fishes, amphibians, and reptiles will be presented. Laboratory sessions will include handling of live animals, examination of necropsy specimens, and case discussions. Students must be enrolled in the Doctor of Veterinary Medicine program.

Typically offered in Spring only

VMC 944 Introduction to Clinical and Professional Communication (1 credit hours)

The ability to communicate with clients is important to successful veterinary practice. The focus of this course is to explore how to effectively communicate with clients in a clinical context. Students will develop verbal and nonverbal communication skills, an understanding of relationship-centered care, management of client interactions, getting informed consent, and communicating complex information. Examples and cases from veterinary medicine will guide application of clinical communication in context.

Typically offered in Spring only

VMC 945 Mobile Veterinary Hospital Shelter Surgery and Medicine (2 credit hours)

This course is designed to offer students additional experience in general small animal soft tissue surgery and shelter medicine. Through partnership with Central North Carolina animal sheltering organizations and utilizing the NC State Mobile Veterinary Hospital, students will primarily gain small animal spay/neuter experience and may also perform additional surgical procedures as needed based on animal patient condition and student abilities. Secondly, students will also provide medical care for sheltered pets including but not limited to primary wellness care, treatment of sick and injured animals and may perform heartworm testing and treatments as needed. This opportunity will consist of an evolving list of external partners that could additionally include community cat organizations and foster care sheltering networks for any given rotation.

Typically offered in Fall and Spring

VMC 946 Extramural Business Management Experience (2 credit hours)

This course is designed to offer students additional business experience in the veterinary industry. Through partnership with external organizations, students will gain business experience and explore topics such as emerging business, legal, and ethical issues, practice management, human resource management, employment contracts and negotiations, buy and selling veterinary practices, and practice financing. This opportunity will consist of an evolving list of external partners and could include organizations offering practice management consulting, human resource consulting, business consulting, insurance and financing.

Prerequisite: 4th year DVM student

Typically offered in Fall only

VMC 947 Practice Management: Evaluating the workflow, services, and financial performance of a hospital (2 credit hours)

The Practice Management rotation is designed for students interested in obtaining a deeper understanding of how to manage a successful veterinary practice. This experience will give students the opportunity to apply business principles learned in the classroom to real world practices. Students will use assessment tools provided to analyze veterinary practices and provide constructive feedback to practice owners. Students will be expected to interview practice owners and staff, observe practice flow and patient care, and perform an in depth financial analysis. Students will then prepare a written summary and present their findings and appropriate recommendations to the practice owner(s).

Prerequisite: 4th year DVM student

Typically offered in Fall and Spring

VMC 948 Clinical Rotation in Veterinary Radiation Oncology (2 credit hours)

This is an elective rotation during the 4th year of CVM professional studies providing an introduction to veterinary radiation oncology. Basic information about radiation therapy equipment, treatment planning and delivery, and outcome of patients treated for various cancers with radiation therapy will be emphasized. Students will be assigned cases being seen by the radiation oncology service as inpatients, outpatients, and new referral appointments.

Prerequisite: VMB 960

Typically offered in Fall and Spring

VMC 949 Equine Primary Care (4 credit hours)

This 4 week course will provide students with an initial one week of intensive clinical experience in equine primary care and three weeks with a NCSU CVM approved equine primary care practice. Students will be seeing a variety of primary care cases from CVM staff and faculty owned horses, state owned horses, and horses from non-profit organizations during the first week at Southern Pines; including vaccinations, dentistry, lameness, imaging, nasogastric intubation, and field surgery. This course is not an externship and students will have outcome assessments from the instructor as well as the veterinarian at the equine primary care practice. During the final three weeks, students will be exposed to a general equine primary care practice. Students will be expected to examine cases, discuss differentials, provide a treatment plan, perform treatments, and provide client communication. Instructor approval for enrollment required.

Prerequisite: 4th year DVM student

Typically offered in Fall and Spring

VMC 950 Sea Turtle Medicine and Rehabilitation (2 credit hours)

This course provides practical experience in husbandry and disease diagnosis and treatment in rehabilitating sea turtles at the Karen Beasley Sea Turtle Rescue and Rehabilitation Center (KBSRRC) in Topsail Beach, NC. Skills to be acquired in clinical and didactic setting include sea turtle husbandry and rehabilitation techniques, diagnostic sample collection and interpretation, physical examination and safe handling, medication delivery, wound treatment, and necropsy protocols.

Prerequisite: 4th year DVM student

Typically offered in Fall only

VMC 951 Companion Animal Medicine and Surgery I (4 credit hours)

Overview of medical and surgical management of selective metabolic, neoplastic, nutritional, immune-mediated, developmental and degenerative diseases of companion animals.

Typically offered in Fall only

VMC 952 Equine Medicine and Surgery (3 credit hours)

Medical conditions in large domesticated animals are presented in this course. Discussions involve the agents causing diseases and the therapeutic methods used to correct. 3 semester hours.

Typically offered in Fall only

VMC 953 Laboratory Animal and Zoological Species Health and Disease II (3 credit hours)

Principles of applied biology, management, physical examination and medical techniques, health problems and medical treatment of laboratory animals, small companion mammals and zoological species will be presented. Laboratory sessions may include handling of live animals, examination of necropsy specimens, and case discussions. Laboratory Animal and Zoological Species Health and Disease II will focus on avian and mammalian species. Students must be enrolled in the Doctor of Veterinary Medicine program.

Typically offered in Fall only

VMC 954 Companion Animal Medicine for Food Animal Students (2 credit hours)

Small animal medicine clinical rotation emphasizing the disciplined detection, prioritizing and planning for therapy of medical diseases in small companion animals. Development of medical judgment and the use of the problem oriented medical record is stressed. This course is intended for DVM students in the food animal focus area.

Prerequisite: Senior DVM student

Typically offered in Fall and Spring

VMC 955 Extramural Experiences in Lab An Med (2 credit hours)

DVM students will have the opportunity to undertake a two-week rotation in an approved laboratory animal facility under the supervision of a laboratory animal veterinarian. This opportunity will meet the need to increase "hands-on" experience as part of the focus area requirements or recommendations.

Corequisite: Current enrollment in DVM program.

Typically offered in Fall and Spring

VMC 956 Advanced Clinical and Professional Communication (1 credit hours)

The ability to communicate with clients is important to successful veterinary practice. This course explores how to effectively communicate with clients in a clinical context during problem appointments. Students will develop verbal and nonverbal communication skills and an understanding of how to manage difficult client interactions including 1) communicating about money, 2) communicating during adverse events, and 3) communicating during euthanasia. Examples and cases from veterinary medicine and simulated client interactions will guide application of clinical communication in context.

Prerequisite: 3rd year DVM student

Typically offered in Fall only

VMC 957 Introduction to Clinical Practice (1 credit hours)

This course has 4 components: a surgery laboratory, a clinical skills laboratory, a communication and wellness case-based facilitated session and community-based experiences. Taken together, these experiences are designed to give students practice and confidence in skills related to small animal general practice.

Typically offered in Fall and Spring

VMC 958 Advanced Prosimian Medicine (2 credit hours)

This course is designed to provide senior veterinary students with clinical experience in prosimian medicine. Students will gain practical experience in the diagnosis, treatment, and prevention of disease in captive prosimians maintained in research facilities. Students participate in formal rounds, autodidactic exercises, and case management at the Duke Lemur Center. Limited to 4th Year DVM curriculum students.

Prerequisite: VMC 991, restricted to 4th year DVM students

Typically offered in Fall and Spring

VMC 959 Advanced Primate Medicine (2-4 credit hours)

The delivery of health care and management to captive and free-ranging primates is a component of zoological, wildlife, and laboratory animal medicine. There is a distinct body of information and techniques for the practice and an increasing demand and opportunity for veterinary graduates with this knowledge. Practical application of techniques and methods for diagnosing disease, delivering health care, and devising preventative medical programs in a research primate facility environment will enable students to evaluate their potential role in the field and equip them to evaluate and responsibly deal with medical issues involving primates.

Typically offered in Fall only

VMC 960 Small Animal Emergency Service (2 credit hours)

Assessment, triage, and management of canine and feline patients admitted to the small animal emergency service after hours.

Prerequisite: fourth year clinics student, DVM student

Typically offered in Fall and Spring

VMC 961 Companion Animal Medicine and Surgery II (3 credit hours)

This course is an overview of medical and surgical management of selected metabolic, neoplastic, nutritional, immune-mediated, developmental, and degenerative diseases of companion animals.

Typically offered in Spring only

VMC 963 Extramural Experience in Zoological Medicine (2 credit hours)

This elective senior year rotation allows students to obtain clinical, laboratory, field, and research experiences in zoological medicine that augment the basic rotations in the zoological medicine focus area. Students can customize their training through participation in a variety of opportunities including epidemiology projects, other basic or clinical research projects, and externships involving captive and free-ranging wildlife & zoo species. does not fulfill senior year requirement for elective credit in Zoo Focus Area

Requisite: Currently enrolled DVM student

Typically offered in Fall and Spring

VMC 964 Zoological Medicine (Zoo and Aquariums) (2 credit hours)

This is a two week rotation at a zoological or aquarium facility. This is an immersive experience at a zoological or aquarium institution. Students will experience zoological medicine for terrestrial and aquatic animals and will be involved in veterinary medical care, husbandry and nutrition medical procedures and discussion. Opportunities will change based on the clinical schedule and medical cases. The time period will be a 2 week time period but can be expanded to 4 weeks. This course is different from the other zoo medicine rotation at the North Carolina Zoo.

Restriction: Must be a 4th year clinical student in the NCSU DVM curriculum.

Typically offered in Fall, Spring, and Summer

VMC 965 Advanced Principles of Surgery (1 credit hours)

This laboratory includes induction and maintenance of anesthesia in representative companion animal, food animal, and equine species; the practice of surgery on anesthetized animals and cadaver specimens; and experience with diagnostic and therapeutic techniques. Students examine, assess, and provide preoperative, intraoperative, and postoperative management of their patients.

Prerequisite: DVM student, Completion of fall semester, VM3 students

Typically offered in Spring only

VMC 966 Equine Emergency and Critical Care (2 credit hours)

An intensive course in the assessment and management of equine emergencies. This would include evaluation of patients, surgical and medical treatment of in house and emergency critical care patients, and post-operative assessment and management. Students will gain valuable practical experience of critically ill patients and rounds will be held daily to ensure a high level of learning.

Prerequisite: 4th year DVM student, Third year veterinary curriculum

Typically offered in Fall and Spring

VMC 967 Clinical Veterinary Dentistry & Oral Surgery (2 credit hours)

Will participate in examination, admission, diagnosis treatment, discharge, and follow-up of patients in dentistry service. Take a clinical history, perform a physical examination, develop appropriate diagnostic plan, discuss the plan with the service's clinicians, and participate in formulation of treatment protocol. Service treats patients Monday-Thursday, Friday reserved for overflow, emergencies, research and teaching. Students given prepared lectures on dental procedures and diseases, and will be allowed to perform supervised procedures on cadavers. (No animals euthanized for this purpose.)

Typically offered in Fall and Spring

VMC 968 Equine Orthopedic Surgery and Lameness (2 credit hours)

Application of problem solving skills and the art, science, and practice of equine orthopedic surgery and lameness in the veterinary teaching hospital setting.

Prerequisite: DVM student, Completion of 3rd year veterinary curriculum

Typically offered in Fall and Spring

VMC 971 Comp Animal Med II (4 credit hours)

1. Obtain a thorough history and perform a complete physical examination. 2. Identifying, defining, and prioritizing problems. 3. Developing and initiating rational diagnostic and therapeutic plans. 4. Performing certain diagnostic and therapeutic procedures. 5. Interpreting results of diagnostic tests, and determining their importance to the patient. 6. Verbal and written communication with clinicians, clients, veterinary techniques, fellow student veterinarians, and referring veterinarians. 7. Determining the point at which it is time to refer a case to a colleague for another look, or to a referral center for specialized diagnostic testing or treatment. 8. Understanding how cases management in private practice compares with referral practice. 9. Approaching issues regarding euthanasia; your decision-making, assisting the owner.

Typically offered in Fall and Spring

VMC 972 Clinical Small Animal Veterinary Cardiology (2 credit hours)

Two-week clinical rotation to provide senior veterinary student training in diagnostic and therapeutic aspects of veterinary small animal cardiology. Clinical experience with patients and clients of Veterinary Teaching Hospital and topic and case review rounds.

Prerequisite: 4th yr. standing in the veterinary curriculum at the CVM, Successful completion of 3rd yr. of Veterinary Curriculum

Typically offered in Fall and Spring

VMC 973 Small Animal Surgery (2 credit hours)

Clinical rotation on the small animal surgery services. Students will be assigned to one of two services, general surgery or orthopedic surgery. Students see cases and assist with care of small animal surgical patients. Students will be on-call to assist with emergency surgery cases.

Prerequisite: Completion of third year veterinary curriculum

Typically offered in Fall, Spring, and Summer

VMC 974 Equine Dentistry and Podiatry (2 credit hours)

This course will provide practical instruction in commonly used skills and techniques necessary for equine dentistry and equine podiatry. It is an intensive, team taught series of didactic lectures, individual laboratories, and clinical case experiences with practitioners that provide students with a high level of experience in equine dentistry and equine podiatry. This course is designed for students in the fourth year of the DVM curriculum, with good horse handling skills and a desire to practice equine veterinary medicine upon graduation. This course is strongly recommended for students with an equine focus or mixed animal focus with an equine concentration. Students must have basic equine handling experience and/or have taken the Equine Behavior Selective. Equine, mixed animal, food animal, and exotics focus students will be given preference.

Typically offered in Fall and Spring

VMC 975 Equine General Surgery (2 credit hours)

Application of problem solving skills and the art, science, and practice of equine general surgery in the veterinary teaching hospital setting.

Prerequisite: DVM student, Completion of 3rd year veterinary curriculum

Typically offered in Fall and Spring

VMC 976 Veterinary Critical Care (2 credit hours)

Assessment and management of companion animal emergency and critical care patients, including several 'hands on' laboratories using cadavers to learn and practice emergency and critical care techniques. Principles of emergency and critical patient evaluation, stabilization, and organ system support are the focus of the course. Out-rotations at area emergency clinics are required. Open only to 4th year students in the small animal focus area.

Prerequisite: 4th year DVM student

Typically offered in Spring only

VMC 978 Equine Lameness and Imaging (2 credit hours)

Development and use of problem solving skills and techniques for diagnosis, treatment, and management of lameness in horses.

Prerequisite: DVM student, Completion of the third year of the veterinary curriculum

Typically offered in Spring only

VMC 979 Equine Medicine (2 credit hours)

Students are responsible for all aspects of patient care and are expected to be dedicated to their patients. Frequent and careful observation of the patients, attention to detail, diligent record keeping, accuracy in formulating and carrying out a treatment plan, and use of common sense are expected. The earlier you note potential problems, the earlier and easier they can be resolved. Irresponsibility, carelessness, lack of accuracy, untruthfulness, or a poor attitude will not be tolerated.

Typically offered in Fall and Spring

VMC 980 Vet Medical Oncology (2 credit hours)

This is a two-week, two credit elective rotation during the 4th year of CVM professional studies providing experience in the diagnosis and treatment of cancer in animals. Emphasis is on development of comprehensive cancer management strategies including ethical considerations, diagnostic techniques, treatment options, and client communication skills. Students will be assigned cases being seen by the oncology service as inpatients, outpatients, and new referral appointments.

Typically offered in Fall and Spring

VMC 981 Lab Animal Medicin (2 credit hours)

The block will provide practical experience in the diagnosis, treatment and prevention of diseases of laboratory animals. It will include special study of diseases of laboratory animals and the management of laboratory animal facilities. Opportunity to perform surgical procedures on common laboratory animals will be provided in a series of surgical labs. There will be field trips to other laboratory animal resource facilities within the Research Triangle Park and surrounding areas. The student will present a seminar on a selected topic for critical appraisal by students and faculty.

Typically offered in Fall and Spring

VMC 982 Ophthalmology (2 credit hours)

The purpose of the ophthalmology course is to acquaint the student with examinations, diagnostics and therapeutic practices, and principles of clinical veterinary medicine. There will be direct supervision by faculty and house officers. Attendance is required at weekly clinical rounds, general medicine rounds, and the patient rounds and mini-seminars conducted within the service. Irregular and/or long hours may be required. Students will be expected to be neatly dressed, well groomed, and conduct themselves in a professional manner at all times.

VMC 983 Dermatology (2 credit hours)

Dermatological disease will represent a significant proportion of your case load, particularly in companion animal practice. Most of the patients that you will see have chronic relapsing disease that can be frustrating, and often costly for the owner. Therefore, whilst an accurate diagnosis represents the first step in dealing with a case, the challenge in this field of medicine is to successfully manage cases in the long term. This requires good and open communication with the client as well as regular patient evaluation. Most of the diagnostic techniques employed in dermatology are very simple and do not require expensive equipment or excessive amounts of time. The key to successful dermatological practice is to use these tools appropriately to recognize conditions such as parasitic infestations and bacterial or yeast infections for which there is a specific course of treatment. It specializes in the diagnosis and management of chronic ear disease and immunological dermatoses such as autoimmune skin diseases, food reactions and atopic dermatitis. The good practitioner however, recognizes that cutaneous manifestations may be a reflection of internal disease and a thorough systemic evaluation is also required. When studying the skin there is one big advantage, it is on the outside.

Typically offered in Fall and Spring

VMC 984 Intro Clin Neuro (2 credit hours)

This service provides diagnosis and management of nervous system disorders in animals, including nuclear imaging, myelography, CT scans, electromyography, neurosurgery, and postoperative patient rehabilitation including hydrotherapy and treadmill training. Attendance is required at weekly clinical rounds, general medicine rounds, and the patient rounds and mini-seminars conducted within the service. Irregular and/or long hours may be required. Students will be expected to be neatly dressed, well groomed, and conduct themselves in a professional manner at all times.

Typically offered in Fall and Spring

VMC 986 Adv Com An Int Med (2 credit hours)

This course provides a higher level experience to diagnosis and management of companion animals with complex medical problems. Students may choose to concentrate on particular aspects of internal medicine. Students are not required to participate in emergency/intensive care unit duty.

Typically offered in Fall and Spring

VMC 987 Aquatic Medicine (2 credit hours)

This course is designed as an elective clinical block rotation in field services, in the final year of the professional DVM curriculum. Students electing the course would have successfully completed the two theoretical/laboratory courses in specialspecies medicine providing the foundation for participation in this course. It is the only clinical course offering hands on experience with medical care delivery to aquatic species.

Typically offered in Fall only

VMC 988 Exotic Animal Medicine (2 credit hours)

This clinical rotation provides practical experience in the diagnosis, treatment and prevention of disease in privately owned small mammals, birds, reptiles, fish, and amphibians. In addition to assisting with the management of clinical cases, students will participate in daily teaching rounds, laboratory activities to increase their technical proficiency, and field visits to various exotic animal collections in NC. Presentation of a short seminar on a clinically relevant topic is required. Irregular and/or long hours, including on-call duty for after-hours emergencies, may be required.

Typically offered in Fall and Spring

VMC 989 Zoological Medicine (4 credit hours)

This course is designed to introduce the senior veterinary students to clinical zoological medicine. Students will gain practical experience in the diagnosis, treatment, and prevention of disease in captive zoological specimens maintained in zoos. Students participate in formal rounds, autodidactic exercises, and case management at the N.C. Zoological Park.

Prerequisite: VMC 964 or successful completion of 3 Zoological Medicine Focus Selectives; and Course Coordinator's Permission

Typically offered in Fall and Spring

VMC 991 SP Top in DOCS (1 credit hours)

One week special topic course in the Department of Clinical Sciences

Corequisite: Current enrollment in DVM program

VMC 992 SP Top in DOCS (1-4 credit hours)

Two week special topic course in the Department of Clinical Sciences.

VMC 993 Equine Special Topics (2 credit hours)

This course is offered to students that have already signed up to take any two of the following courses: Preventative Health Care, Equine Medicine, Equine Surgery, or Equine Theriogenology. The course is designed to give additional experience in equine-oriented clinical services at NCSU. Students will not be able to participate in this block off campus, unless working directly with a NCSU faculty member. A faculty mentor must be identified within one month of signing up for this course and a written proposal of activities planned submitted to Dr. Gardner.

Typically offered in Fall and Spring

VMC 994 Small Animal 4th Year Extramural Studies (1-6 credit hours)

This course is a recommended rotation designed to expand opportunities for senior veterinary students to participate in small animal private practice a) enhance and learn clinical and technical skills, b) develop effective client communication skills and time management, and c) observe elements of small business management, including personnel involved and professional financial interactions with private clients. Students will work at a private or corporate veterinary practice under the direct supervision of a licensed veterinarian engaged in small animal practice. Must be senior student in the DVM program.

Typically offered in Fall and Spring

VMC 995 Clinical Conference (1 credit hours)

This weekly seminar course will incorporate a range of topics relevant to success in the clinical year and beyond, including preparation for the NAVLE exam, integration of themes and topics presented elsewhere in the DVM curriculum, job search strategies, employment contracts, financial literacy and loan repayment, critical reflection, and others. The course calendar is based on relevant topics to members of the senior class as they pass through the academic year. Topics will be addressed in an interactive and discussion-based manner and will be selected with input from the student body.

Restriction: Active DVM student in year 4 of the curriculum (successful completion of years 1-3)

Typically offered in Fall, Spring, and Summer

VMC 996 Advanced Exotic Animal Medicine (2 credit hours)

Students will work with client-owned exotic animals in the CVM hospital and our in-house teaching animal colonies to further refine skills in exotic animal handling, diagnostic sample collection for multiple species, and anesthesia and radiology acquisition and interpretation of multiple exotic animal species. Cadavers will be used to teach orthopedic and soft tissue surgical procedures in birds, reptiles, and mammals. Students and faculty will spend 1-5 days in the field, travel restrictions permitting, working with psittacine birds, waterfowl, and potentially raptors at several local parrot rescue organizations and wildlife facilities. Restricted to senior DVM students only that have already completed VMC 988.

P: VMC 988

Typically offered in Fall and Spring

VMC 997 Raptor Medicine and Rehabilitation (2 credit hours)

This elective senior year rotation allows students to obtain clinical experience in raptor medicine and rehabilitation at Carolina Raptor Center in Charlotte, N.C. Students will develop skills with species identification, capture and handling, physical examination, bandaging, diagnostic sample collection and interpretation, emergency stabilization and treatment techniques, necropsy, anesthesia and surgery assistance, and captive management and husbandry issues. A maximum of 2 students will be permitted in each 2-week clinical rotation. For students enrolled in DVM Curriculum. Will partially fulfill senior year requirement for elective clinical rotation credit in Zoo Focus Area.

Typically offered in Fall and Spring

VMC 998 Basic Wildlife Rehabilitation Medicine (2 credit hours)

Wildlife rehabilitation medicine, the delivery of health care and management to free-ranging native wildlife with the goal of re-release is an important component of clinical veterinary medicine. Students in this basic course will work with instructors to learn to apply practical medical and surgical techniques and methods for diagnosing disease, delivering health care, and implementing appropriate triage for injured and ill North Carolina native wildlife. Restricted to DVM Curriculum 4th year students.

Prerequisite: VMC 964 or successful completion of 3 Zoological Medicine Focus Selectives, VMC 989, and Course Coordinator's Permission

Typically offered in Fall and Spring

VMC 999 Advanced Wildlife Rehabilitation Medicine (2 credit hours)

Wildlife rehabilitation medicine, the delivery of health care and management to free-ranging native wildlife with the goal of re-release is an important component of clinical veterinary medicine. Students in this advanced course will apply practical medical and surgical techniques and methods learned in the basic course for diagnosing disease, delivering health care, and implementing appropriate triage for injured and ill North Carolina native wildlife. They will assist staff and faculty in managing cases native to North Carolina.

Prerequisite: VMC 964 or VMC 998

Typically offered in Fall and Spring