560 Introduction to Shelter Veterinary Medicine
Fall, 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine or in the Department of Small Animal Clinical Sciences. Introduction to shelter veterinary medicine. Field trips required.

561 Clinical Competencies III
Fall, 1(0-2) R: Completion of Year 2 of the graduate professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine. Development of skills for the safe and humane examination and handling of dogs and cats. Performance of common procedures for obtaining specimens and administering medication.

563 Introduction to Exotic Species and Small Mammal Medicine
Spring, 1(1-0) R: Completion of year 1 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine. Basic anatomy, physiology, and common disease processes of small mammals, birds, and reptiles. Species include ferrets, rabbits, guinea pigs, small rodents, pet birds, and reptiles.

564 Applied Small Animal Nutrition
Fall, 1(1-0) R: Completion of year 1 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine. Principles of life stage nutrition and making dietary recommendations for healthy and sick small animal patients.

565 Animal Behavior
Spring, 1(1-0) R: Completion of year 1 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine. Diagnosis, treatment and prevention of behavioral problems in dogs and cats. Topics include problem prevention, behavioral intervention, aggression, anxiety related problems, inappropriate elimination, normal unwanted behavior, client counseling and interaction, and companion animal welfare.

566 Emergency and Critical Care Medicine Seminars
Fall, Spring: 1(1-0) R: Completion of year 1 of the graduate professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine. Case-based discussion of small animal veterinary emergency and critical care medical issues.

567 Small Animal Clinical Oncology
Fall, 1(1-0) R: Completion of year 2 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine. Overview of cancer in dogs and cats. Clinical management.

568 Small Animal Advanced Orthopedics Seminars
Fall, 1(1-0) R: Completion of year 2 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine. Basic biomechanics and research in orthopedics including novel concepts and techniques in fracture management, arthroplasties, corrective osteotomies, implant design, and performance.

569 Cardiology
Fall, 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine or in the Department of Small Animal Clinical Sciences. Develop skills and gain experience in common diagnostic tests. Cardiac structure and function. Medical and surgical therapy of common cardiac diseases. Case presentations. Laboratories and small group discussion.

590 Selective Topics in Small Animal Clinical Sciences
Fall, Spring, 1(1-0) R: Completion of year 1 of the graduate professional program in the College of Veterinary Medicine R: Open to graduate-professional students in the College of Veterinary Medicine. Topics vary.

611 Diagnostic Imaging Clerkship
Fall, Spring, Summer. 3 credits. R: Completion of semester 5 of the professional veterinary program. Diagnostic radiography and ultrasound imaging. Radiation safety. Special procedures.

612 Problems in Diagnostic Imaging Clerkship
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: (SCS 611) and Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. Advanced diagnostic radiography, ultrasound imaging, and magnetic resonance imaging.

613 Diagnostic Ultrasound Clerkship
Fall, Spring, Summer. 3 credits. RB: (SCS 611) and Completion of semester 5 of the professional veterinary program. R: Open to graduate-professional students in the College of Veterinary Medicine. Principles of ultrasound physics, ultrasound scanning techniques, and interpretation of ultrasound imaging.

625 Small Animal Primary Care Clerkship
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Completion of semester 5 of the professional veterinary program. R: Open to graduate-professional students in the College of Veterinary Medicine. Primary care for wellness, common injuries, and illnesses.

626 Small Animal Soft Tissue Surgery Clerkship
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in College of Veterinary Medicine. Diagnosis and preoperative, surgical, and postoperative care of patients requiring routine elective and major soft-tissue surgical procedures.

630 Spay/Neuter Clerkship
Fall, Spring, Summer. 3 credits. RB: (SCS 626 and SCS 648) and Completion of semester 5 of the graduate professional program.

631 Problems in Soft Tissue Surgery Clerkship
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: (SCS 626) and Completion of semester 5 of the graduate professional program in the College of Veterinary Medicine. Soft tissue surgery problems.

637 Operative Surgery: Instruction and Review
Fall. 3 credits. R: VM 557 RB: Completion of semester 5 of the professional veterinary program. R: Open to graduate-professional students in the College of Veterinary Medicine. Participation in the instruction of VM 557 (Operative Surgery), with preparation for the laboratory and discussion after the laboratory. Performance of additional surgical procedures, case discussions, rounds, and anatomy review. Approved independent study project required.

640 Cardiology Clerkship
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in College of Veterinary Medicine. Diagnosis and medical, and surgical treatment of small animal thoracic and cardiovascular disorders.

641 Comparative Ophthalmology Clerkship
Fall, Spring, Summer. 3 credits. R: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in College of Veterinary Medicine. Ophthalmic evaluation of all species. Diagnosis and medical and surgical treatment of ophthalmic disease.

642 Zoo and Wildlife Clerkship
Fall, Spring, Summer. 3 credits. RB: Completion of semester 5 of the professional veterinary program. R: Open to veterinary medicine students in the College of Veterinary Medicine. Zoo animal and wildlife medicine and surgery.

643 Neurology Clerkship
Fall, Spring, Summer. 3 credits. RB: Completion of semester 5 of the professional veterinary program. R: Open to graduate-professional students in the College of Veterinary Medicine. Diagnosis, medical, and surgical treatment of small animal neurological disorders.
Dermatology Clerkship  
Fall, Spring, Summer. 3 credits. RB: Completion of semester 5 of the professional veterinary program. R: Open to graduate-professional students in the College of Veterinary Medicine. Diagnosis and treatment of small animal dermatological disorders.

Intensive Care Unit Clerkship  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in College of Veterinary Medicine. Not open to students with credit in SCS 622. Intensive care and management of critically ill small animals.

Small Animal Orthopedic Surgery Clerkship  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in the College of Veterinary Medicine. Diagnosis and preoperative, surgical, and postoperative care of patients requiring routine and major orthopedic surgical procedures.

Small Animal Internal Medicine Clerkship  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in the College of Veterinary Medicine. Diagnosis and therapy for complicated medical cases of small animals.

Anesthesia Clerkship  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Completion of semester 5 of the professional veterinary program. Pre-anesthesia evaluation, induction, monitoring, and recovery of small animal patients requiring routine and major surgical procedures.

Advanced Cardiology Clerkship  
Spring. 3 credits. RB: (SCS 640) and Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. Advanced cardiology practice.

Advanced Comparative Ophthalmology Clerkship  
Spring. 3 credits. RB: (SCS 641) and Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. R: Approval of department. Problem-oriented approach to complex ocular disease processes at the gross and microscopic levels.

Problems in Neurology Clerkship  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: (SCS 643) and Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. Neurologic problems.

Clinical Medical Oncology Clerkship  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Completion of Semester 5 of the graduate professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine. Management of veterinary cancer patients, including diagnosis, staging evaluation, prognostication and multimodality therapy. Daily clinical rounds and didactic topics.

Clinical Surgical Oncology Clerkship  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Completion of Semester 5 of the graduate professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine. Surgical management of veterinary cancer patients, including diagnosis, staging evaluation, surgical techniques, and perioperative prognosis.

Clinical Nutrition for Small Animals  
Fall, Spring. 3 credits. RB: Completion of Semester 5 of the graduate-professional program in the College of Veterinary Medicine. Principles of clinical nutrition and dietetics for dogs and cats: diet evaluation, nutritional assessment, critical care nutrition support, and clinical case evaluations.

Veterinary Molecular Biology Clerkship  
Fall, Spring. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. Concepts and techniques of veterinary molecular biology.

Problems in Small Animal Clinical Sciences Clerkship  
Fall, Spring. 3 credits. A student may earn a maximum of 9 credits in all enrollments for this course. RB: Completion of semester 5 of the professional veterinary program. R: Open to veterinary medicine students. Special problems.

Small Animal Specialty Practice Clerkship  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 9 credits in all enrollments for this course. RB: Completion of semester 5 of the professional veterinary program. R: Open to graduate-professional students in the College of Veterinary Medicine. Supervised, off-campus, specialty practice experience in an assigned veterinary practice or other school of veterinary medicine.

Emergency and Critical Care Medicine Clerkship  
Fall, Spring. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in the College of Veterinary Medicine. Admission, triage, diagnosis, treatment, and discharge of patients entering an emergency service. Daily instructional rounds.

Problems in Small Animal Surgery  
Fall, Spring, Summer. 1 to 9 credits. A student may earn a maximum of 15 credits in all enrollments for this course. R: Open only to graduate students in the Department of Small Animal Clinical Sciences. Problems in small animal surgery.

Small Animal Seminar  
Fall, Spring, Summer. 1(1-0) A student may earn a maximum of 3 credits in all enrollments for this course. R: Open only to graduate students in the Department of Small Animal Clinical Sciences. Small animal seminar.

Experimental Design and Analysis of Clinical Research  
Fall of odd years. 2(2-0) R: Approval of department. Experimental design and analysis in the animal medical sciences with particular emphasis on pre-clinical and clinical veterinary experiments.

Comparative Systems Review in Oncologic Medicine - Supradiaphragmatic  
Fall. 2(2-0) RB: Completion of year 2 of the graduate professional program in the College of Veterinary Medicine. Literature review of supradiaphragmatic oncologic diseases organized by organ system. Comparative aspects of the specific malignancies in human and veterinary oncology.

Comparative Systems Review in Oncologic Medicine - Subdiaphragmatic  
Spring. 2(2-0) RB: Completion of year 2 of the graduate professional program in the College of Veterinary Medicine. Literature review of subdiaphragmatic oncologic diseases organized by organ system. Comparative aspects of the specific malignancies in human and veterinary oncology.

Master's Thesis Research  
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to graduate students in the Department of Small Animal Clinical Sciences. Master's thesis research.