

## SMALL ANIMAL CLINICAL SCIENCES

SCS

### Department of Small Animal Clinical Sciences College of Veterinary Medicine

#### 561 Fundamental Clinical Skills for Small Animals

Fall. 1(0-2) RB: 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.

#### 562 Veterinary Medical Genetics

Spring. 1(1-0) RB: 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.

Mechanisms, recognition, diagnosis, and control of genetics diseases in veterinary medicine.

#### 563 Introduction to Exotic Species and Small Mammal Medicine

Spring. 1(1-0) RB: 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

Spring. 1(1-0) RB: 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

Fall. 1(1-0) RB: 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. 1(1-0) RB: 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) RB: 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) RB: 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, arthropathies, corrective osteotomies, implant design, and performance.

#### 590 Selective Topics in Small Animal Clinical Sciences

Fall, Spring. 1(1-0) RB: 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 or in the Department of Small Animal Clinical Sciences.

Important field of study in Small Animal Clinical Sciences

#### 611 Diagnostic Imaging Clerkship

Fall, Spring, Summer. 3 credits. RB: 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. 3 credits. RB: (SCS 611) and Completion of semester 5 of the professional veterinary program. R: Open only 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 General Medicine Clerkship

Fall, Spring, Summer. 3 credits. RB: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in College of Veterinary Medicine.

Diagnostic and treatment services for routine and emergency outpatients.

#### 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 veterinary program.

Ovariohysterectomy or orchectomy. Aspects of pre- and post-operative management and anesthesia.

#### 636 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 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. P: 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. RB: 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.

## Small Animal Clinical Sciences—SCS

- 643 Neurology Clerkship**  
Fall, Spring, Summer. 3 credits. 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 666.  
Diagnosis and medical and surgical treatment of small animal neurological disorders.
- 644 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.
- 645 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.
- 646 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.
- 647 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.
- 648 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 procedure.
- 650 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.
- 651 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.
- 653 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 and completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine.  
Neurologic problems.
- 654 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.
- 655 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.
- 670 Clinical Nutrition for Small Animals**  
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.
- 690 Veterinary Molecular Biology 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.  
Concepts and techniques of veterinary molecular biology.
- 693 Problems in Small Animal Clinical Sciences 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 graduate-professional program in the College of Veterinary Medicine. R: Open to veterinary medicine students.  
Special problems.
- 694 Small Animal Specialty Practice 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 veterinary medicine students in the College of Veterinary Medicine.  
Supervised, off-campus, specialty practice experience in an assigned veterinary practice or other school of veterinary medicine.
- 695 Emergency and Critical Care 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.  
Admission, triage, diagnosis, treatment, and discharge of patients entering an emergency service. Daily instructional rounds.
- 808 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.
- 813 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.
- 820 Experimental design and analysis of clinical research**  
Fall. 2(2-0) RB: House Officers of the Veterinary Teaching Hospital or approval of department. R: Not open to undergraduate students.  
Experimental design and analysis in the animal medical sciences with particular emphasis on pre-clinical and clinical veterinary experiments.
- 823 Wildlife Disease Ecology and Management**  
Summer of even years. 3(2-3) Interdepartmental with Fisheries and Wildlife and Large Animal Clinical Sciences. Administered by Fisheries and Wildlife. RB: (FW 423) or previous course work in vertebrate ecology, epidemiology or animal disease management. R: Open only to graduate students in the College of Agriculture and Natural Resources or the College of Natural Science or the College of Veterinary Medicine.  
Ecological and epidemiological principles of wildlife disease investigation and management.
- 830 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.
- 831 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.
- 832 Comparative Cancer Biology**  
Spring. 2(2-0) RB: Completion of year 2 of the graduate professional program in the College of Veterinary Medicine.  
Concepts in cancer biology. Comparative medicine.

**833 Pharmacology of Anticancer  
Chemotherapeutics**

Fall. 2(2-0) RB: Completion of year 2 of the graduate professional program in the College of Veterinary Medicine.

Literature review and discussion of drugs and other agents used in the treatment of neoplastic diseases in humans and companion animals.

**834 Principles of Cancer Protocol Design**

Fall. 2(2-0) RB: Completion of year 2 of the graduate professional program in the College of Veterinary Medicine.

Principles of the design and evaluation of clinical trials in oncology.

**835 Comparative Aspects of Tumor  
Immunology**

Spring. 2(2-0) RB: Completion of year 2 of the graduate professional program in the College of Veterinary Medicine.

Understanding the immune system's response to neoplastic cells and how the immune response may be recruited to fight cancer. Comparative aspects of immunology.

**899 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.