

PROFESSIONAL 600-699 Courses

PROFESSIONAL 700-799 (Given for VM Credit only-Academic Affairs approve these courses.)

# / Type	Credits/ Grading	Offered	Standing	Course	Catalog Description	Coordinator
CS 709 /D	4/G	Fall	3rd yr	Medicine I Bagladi, Harkin, KuKanich, Schermerhorn	(4) I. Consideration of medical and pathophysiologic aspects of diseases affecting the urinary, endocrine, integumentary, respiratory, hemic, and neuromuscular systems. Four 1-hour lectures per week. Pr.: Third-year standing in the College of Veterinary Medicine.	Harkin
CS 710 /D	3/G	Spring	3rd yr	Medicine III L. Beard, Blevins, Davis, Rush, Delph, A Rankin	(3) II. A study of the etiology, clinical signs, diagnosis, treatment, and control of common diseases which affect horses. Three hours lecture a week. Pr.: CS 709.	Davis
CS 711 /D	4/G	Spring	3rd yr	Medicine II L. Beard, Harkin, Higginbotham, A. Rankin, J. Thomason, Wouda	(4) II. Consideration of the medical and pathophysiological aspects of diseases affecting the gastrointestinal, cardiovascular, and ophthalmic systems, oncology, and dentistry. Four 1-hour lectures per week. Pr.: Third-year standing in the College of Veterinary Medicine.	Harkin
CS 712 /D	4/G	Fall	3rd yr	Food Animal Medicine Apley, Miesner, Reppert Others: Karriker	(4) I. A study of the etiology, clinical signs, diagnosis, treatment, and control of diseases which affect cattle, swine, and sheep. Four hours lec. a week. Pr.: Third-year standing in the College of Veterinary Medicine.	Miesner
CS 713 /D	1/G	Spring	3rd yr	Beef Production Medicine Larson, Huser Other Team Teachers: Dritz	(1) II. The role of the veterinarian in livestock production units, including interactions with producers, nutritionists, investors and others in decision analysis. Emphasis is on the professional services that veterinarians provide to beef production systems. Pr.: Third-year standing in the College of Veterinary Medicine.	Huser
CS 714 /D	2/G	Spring	3rd yr or grad stud	Clinical Nutrition, Others: MMI, Meuller, Wileman	(2) II. A focus on practical aspects of nutrition as it relates to performance, health and animal well-being of food-producing animals and, programs designed for health and well-being of small animals including exotic animals. Nutritional aspects of the mechanisms of health and disease are taught primarily at the individual and population level with some molecular and cellular aspects included. Designed for all students to be able to properly nourish animals in their care during their career. Pr.: Third-year standing in the College of Veterinary Medicine or graduate student.	Thomson
CS 715 /D	3/G	Spring	2nd yr	Radiology Biller	(3) II. The theory and principles of x-rays, production and interpretation of radiographs and exposure factors, special	Biller

					radiographic methods, film storage and handling, processing, safety measures, and biologic effects of radiation. Two hours lec. a week. Pr.: Second-year standing in the College of Veterinary Medicine.	
CS 721 /D	1/G	Fall	3 rd yr	Veterinary Surgery I Laboratory Klocke	(1) I, Introduction to the basics of veterinary anesthesia, surgical techniques, and patient management by a systems design. Problems common to all species of domestic animals will be presented to provide foundations of surgical knowledge and experience. Pr.: Concurrent with or successful completion of CS 729.	Klocke
CS 722 /D	1/G	Spring	3 rd yr	Veterinary Surgery II Laboratory W Beard	(2) II, A continuation of Veterinary Surgery I Lab. Introduction to the basics of veterinary anesthesia, surgical techniques, and patient management by a systems design. Problems common to all species of domestic animals will be presented to provide foundations of surgical knowledge and experience. Pr. Conconcurrent with or successful completion of CS 730.	W Beard
CS 724 /C	3/G	All 3 week rotations	4th yr	Veterinary Diagnostic Imaging I Biller, Cassel, Anselmi	(3) I, II, S. Radiographic, ultrasonographic, and nuclear imaging in the clinical setting, with emphasis on making/identifying images of diagnostic quality, interpretation, indications for imaging, and radiation safety. Pr.: Fourth-year standing in the College of Veterinary Medicine.	Biller
CS 725 /C	3/G	All 3 week rotations	4th yr	Clinical Anesthesia Hodgson, Mason, McMurphy, D. Rankin	(3) I, II, S. Practical instruction in the skills and techniques used in the practice of clinical veterinary anesthesia of both large and small animals. May be repeated once. Pr.: Fourth-year standing in the College of Veterinary Medicine.	McMurphy
CS 726 /O	1-6/CR	All	4th yr	Clinical Externship/Programmed Study (includes Amer. Royal)	(1-6) I, II, S. Provides the professional student with the opportunity to study with specialists not available at Kansas State University or in unique areas of veterinary medical practice or research. Pr.: Fourth-year standing in the College of Veterinary Medicine and the approval of the externship or program of study by the course coordinator.	Davis
CS 727 /C	2/G	All 2 week rotations	4th yr	Ophthalmology A. Rankin, Meekins	(2) I, II, S. The study of the surgery and medical diagnosis and treatment of ocular disease in animals in the setting of the veterinary medical hospital. Problem solving, differential diagnosis, diagnostic procedures, and medical and surgical therapy will be emphasized using veterinary patients. Pr.: Fourth-year standing in the College of Veterinary Medicine.	A. Rankin
CS 728 /D	3/G	Fall	3 rd yr	Theriogenology Larson, Grady	(3) I. Consideration of prevention, diagnosis, and treatment of disease, and maintenance of health and productivity of the genital tract of domestic species. Three hours of lecture a week Pr.: Third-year standing in College of Veterinary Medicine or graduate student.	Larson

CS 729 /D	4/G	Fall	3rd yr	Veterinary Surgery I Hodgson, E. Klocke, Mason, D. Rankin, Renberg, Roush	(4) I. Introduction to the basics of veterinary anesthesia, surgical techniques, and patient management by a systems design. Problems common to all species of domestic animals will be presented to provide foundations of surgical knowledge and experience. Four hours lec. Pr.: Satisfactory completion of all required second year veterinary courses.	E. Klocke
CS 730 /D	3/G	Spring	3rd yr	Veterinary Surgery II Apley, W. Beard, Hodgson, Mason, Miesner, Santschi	(3) II. A continuation of Veterinary Surgery I. Introduction to the basics of veterinary anesthesia, surgical techniques, and patient management by a systems design. Problems common to all species of domestic animals will be presented to provide foundations of surgical knowledge and experience. Three hours lec.	W. Beard
CS 737 /D	2/G	Fall	3 rd yr	Exotic Pet Medicine Carpenter, Eshar Others: Dryden, Okesson	(2) I. Entry-level knowledge base for the species likely to be encountered in a private practice setting including snakes/small reptiles, caged birds, and small mammals (ferrets, gerbils, hamsters, chinchillas). Pr.: Third-year standing in the College of Veterinary Medicine.	Carpenter
CS 738 /C	2/G	All 2 week rotations	4th yr	Clinical Oncology Higginbotham, Wouda	(2) I, II, S. The approach to diagnosis and treatment of cancer-bearing patients will be emphasized. Skills to master include fine needle aspirates and basic cytology, biopsy techniques (punch, wedge, pinch and tru-cut), bone marrow aspirate and core biopsy procedures and chemotherapy administration. A greater depth of understanding of the biologic behavior and treatment options of commonly seen tumor types (lymphoma, mast cell tumors, hemangiosarcoma, osteosarcoma, etc.) and chemotherapy safety will be emphasized. Medical management of cancer-related problems as well as treatment of therapy-induced side effects will also be covered. Pr.: Fourth-year standing in the College of Veterinary Medicine.	Higginbotham
CS 739 /C	2/G	All 3 week except 2D, 4D, 6E, 9A and 9B Derm is 3 weeks in duration but only meets Tu, W, Th	4 th yr	Dermatology / Medicine Bagladi	(2) I, II, S. Designed to emphasize dermatology diagnostic work-up and management of dermatologic cases. May include proper techniques for performing procedures such as skin scrapings, bacterial and fungal culturing, performing cytology, obtaining skin biopsies, ear cleaning and trichography. Pr.: Fourth-year standing in the College of Veterinary Medicine.	Bagladi
CS 740 /C	1/G	Fall	3 rd Yr	Topics in Emergency Medicine McMurphy (25 student max.)	(1) I. Presentations of cases in the ICU or cases that were recently seen on emergency. Current literature that is relevant to the case will be discussed. Pr.: Third-year standing in the College of Veterinary Medicine and CS 811 "Basic Concepts in Emergency and Critical Care Medicine".	McMurphy

CS 741 /D (DVM 702)	1/G	Spring	3 rd yr	Veterinary Practice Management	(1) II. This course provides a foundation in business management and marketing to prepare veterinary students for success in private veterinary practice. Lectures include personal marketing, business organizational structure, gauging and monitoring production, management practice finance, recruitment, personnel management, effective practice marketing (internal and external), achieving better client satisfaction and retention, and the road to practice ownership. Pr.: Third-year standing in the College of Veterinary Medicine or consent of instructor.	Schwartz
CS 742 /D	0-1/CR	Fall, Spring	3 rd yr	Clinical Skills Various CS Faculty	(1) II. Demonstration, instruction and experience in physical examination and diagnostic skills necessary for routine veterinary practice. Pr.: Third-year standing in the College of Veterinary Medicine. Three hours lab a week.	KuKanich (fall) Davis (spring)
CS 746 /C	2/G	Spring, Summer Offered only 1A, 1B, 1C, 8C, 9A and 9B	4 th yr	Clinical Equine Theriogenology Grady	(2) II, S. Students will participate in routine procedures that develop skills in handling horses, rectal exams, ultrasonography, semen collection, artificial insemination, uterine therapies and minor surgical procedures. Pr.: Fourth-year standing in College of Veterinary Medicine.	Grady
CS 747 /D	2/G	Spring	3 rd yr	Systems Integration of Small Animal Internal Medicine Harkin	(2) II. Elective course in small animal internal medicine. This course will provide in-depth learning of complex issues regarding case management of the canine and feline patient with an integrated systems approach. The course will also introduce controversial and emerging topics in small animal internal medicine. Pr.: CS 709 and CS 711.	Harkin
CS 748 /C	2/G	All 2 week rotations	4 th yr	Food-Animal Livestock Local Practice Chamorro, Robinson	(2) I, II, S. A study of the role of the veterinarian in the practice of clinical medicine in livestock production units. Students will work under faculty supervision in ambulatory and local practice settings. Pr.: Fourth-year standing in the College of Veterinary Medicine.	Miesner
CS 749 /C	2/G	All 2 week rotations	4 th yr	Food-Animal Livestock Medicine & Surgery Miesner, Reppert	(2) I, II, S. A study of individual food-animal livestock medicine and surgery. Students will work under faculty supervision in an in-house setting. Pr.: Fourth-year standing in the College of Veterinary Medicine.	Miesner
CS 750 /C	2/G	All 2 week rotations	4 th yr	Equine Medicine L. Beard, Davis, Delph	(2) I, II, S. This course will offer general exposure to equine internal medicine and theriogenology. Students will be responsible for diagnoses, treatment and nursing care of out-patients, in-patients and emergency duties. Pr.: Fourth-year standing in the College of Veterinary Medicine.	L. Beard
CS 751 /C	2/G	All 2 week rotations	4 th yr	Equine Surgery W. Beard, Santschi	(2) I, II, S. This course will offer general exposure to equine surgery and theriogenology. Students will be responsible for diagnoses, treatment and nursing care of out-patients, in-patients, and emergency duties. Pr.: Fourth-year standing in the College of	L. Beard

					Veterinary Medicine.	
CS 752 /C	3/G	All 3 week rotations	4 th yr	Small Animal Internal Medicine Harkin, KuKanich, Schermerhorn	(3) I, II, S. The study of internal medicine in the setting of the Veterinary Medical Teaching Hospital. Students will be engaged in the diagnosis and management of complex cases referred to the internal medicine service. Pr.: Fourth-year standing in the College of Veterinary Medicine.	Harkin
CS 753 /C	3/G	All 3 week rotations	4 th yr	Small Animal General Medicine E. Chamorro, Artzer, Boyer, Nelson	(3) I, II, S. The study of preventative medicine, general practice medicine, and specialty medicine. Pr.: Fourth-year standing in the College of Veterinary Medicine.	Harkin
CS 754 /C	3/G	All 3 week rotations	4 th yr	Clinical Small Animal Soft Tissue Surgery E. Klocke, Renberg, Roush, Berke, D Upchurch	(3) I, II, S. This course is designed to train senior or elective veterinary students in the diagnosis and treatment of small animal soft tissue and general surgical diseases through participation in the Small Animal Soft Tissue Service of the Veterinary Medical Teaching Hospital. Pr.: Fourth-year standing in the KSU College of Veterinary Medicine.	Renberg
CS 755 /C	3/G	All 3 week rotations	4 th yr	Clinical Small Animal Orthopedic Surgery Renberg, Roush, Berke	(3) I, II, S. This course is designed to train senior or elective veterinary students in the diagnosis and treatment of small animal orthopedic surgical diseases through participation in the Small Animal Orthopedic Service of the Veterinary Medical Teaching Hospital. While on SAS-ortho, students will spend one week in dentistry (primary care). Pr.: Fourth-year standing in the KSU College of Veterinary Medicine.	Renberg
CS 756 /C	2/G	All 2 week rotations except 1C	4 th yr	Comparative Cardiology J. Thomason	(2) I, II, S. Designed to expose students to the cardiovascular system of domestic animals, emphasizing clinical management and understanding of common congenital and acquired cardiac diseases. Pr.: Fourth-year standing in the College of Veterinary Medicine.	J. Thomason
CS 757	1/CR	Spring	Satisfactory completion of all 2 nd yr veterinary courses	Equine Lameness I Santschi	(1) II. Lectures will cover common causes of lameness emphasizing specific portions of the lameness exam providing the foundation for diagnosis and treatment of specific equine musculoskeletal diseases. Students will perform lameness exams including diagnostic imaging to correctly diagnose the “unknown lameness” and prescribe appropriate therapeutic options. 12 lectures, 3 labs. Pr: Satisfactory completion of all required second year veterinary courses.	Santschi
CS 759 /D	1/G	Spring	3rd yr	Advanced Exotic Pet Medicine Introduction to Zoological Medicine Elective Carpenter, Eshar	(1) II. Advanced study of the diseases, medicine, and captive management of non-traditional species including companion birds, reptiles, rabbits, ferrets, and rodents; and an introduction to zoo animal and wildlife medicine. Pr.: Third-year standing in the College of Veterinary Medicine.	Carpenter
CS 760 /D	1/G	Spring	1 st , 2 nd yr. or Grad student w/ instructor permission	Topics in Global Veterinary Medicine Renberg	(1) II. An overview of the role of veterinarians around the world. Topics include international uses and attitudes about animals, problems the world faces pertaining to livestock production, and social tensions. One hour lecture each week. Pr.: 1 st or 2 nd year	Renberg

					standing in the College of Veterinary Medicine, or enrolled as a graduate student with instructor permission.	
CS 762 /C	2-4/G	All	4 th yr	Supplemental Small Animal Emergency S Thomason	(2) I, II, S. An opportunity to pursue additional training in the management of small animal patients presented to the emergency services. Evaluation, management, and monitoring of small animal patients in the intensive care unit. Pr.: Fourth-year standing in the College of Veterinary Medicine.	S Thomason
CS 763 /C	2/G	2 week rotations 2A, 2C, 3A, 4B, 5C, 6A, 7A, 8A, 8C and 9A	4 th yr	Laboratory Animal Medicine Olson	(2) I, II, S. The study of laboratory animal medicine or comparative medicine to include colony health monitoring, preventive medicine, surgery, investigator support, and regulatory oversight. Pr.: DMP 759 or requires coordinator approval. Fourth-year standing in the College of Veterinary Medicine.	Davis
CS 766 /O	1/CR	All	1st, 2 nd and 3rd yr	Pre-Clinical Food Animal (Mixed) Practice Mentorship	(1) I,II,S. Structured one week (45 contact hrs) mentorship in a large animal (bovine) practice designed to promote clinical skills training in a private practice setting with practitioners who have expressed an interest in training and mentoring veterinary students. Pr.: First, second, or third year standing in the College of Veterinary Medicine.	Elmore
CS 767 /O	1/CR	All	1st, 2 nd and 3rd yr	Pre-Clinical Small Animal Practice Mentorship	(1) I,II,S. Structured one week (45 contact hrs) mentorship in a small animal practice designed to promote clinical skills training in a private practice setting with practitioners who have expressed an interest in training and mentoring veterinary students. Pr.: First, second, or third year standing in the College of Veterinary Medicine.	Elmore
CS 768 /O	1/CR	All	1 st , 2 nd and 3 rd year	Pre-Clinical Non-Traditional Practice Mentorship	(1) I,II,S. Structured one week (45contact hrs) mentorship in a nontraditional veterinary setting designed to promote skills training and awareness of nontraditional or exclusive practice experiences in a private or public practice setting with veterinarians who expressed an interest in training and mentoring veterinary students. Pr.: First, second, or third year standing in the College of Veterinary Medicine.	Elmore
CS 769 /D	2/G	Summer, Fall Offered 2A and 5A	4 th yr	Advanced Feedlot Production Management Apley, Thomson	(2) I, S. Students desiring feedlot/stocker production training. Focus on effects of nutrition, preventative medicine, environment, personnel training and other issues on the health of growing/finishing cattle.	Apley
CS 770 /D	2/G	Spring, Summer Offered 1C and 8B	4 th yr	Advanced Cow-Calf Production Management Larson, White	(2) II, S. For students desiring in-depth cow-calf production training including management and assessment of production data, nutrition and ration balancing, reproductive strategies, quality assurance and economic and Standardized Performance Analysis of cow-calf enterprises.	White
CS 771	1/G	All	4 th yr	General Dentistry	(1)I, II, S. Skills and concepts common to general dentistry practice	Artzer

/C				E. Chamorro, Artzer	in the feline and canine, pre-operative exams, day-long wet lab to take and interpret digital intraoral radiographs, extract teeth, and perform dental nerve blocks. Also may participate in the evaluation, diagnosis, and treatment of primary care patients. Pr.: 4 th -year standing in College of Veterinary Medicine.	
CS 772 /C	2/G	All 2 week rotations	4 th yr	Equine Field Service C. Blevins, Grady	(2) I, II, S. This course will offer general exposure to equine field service and theriogenology. Students will be responsible for diagnoses, treatment and nursing care of out-patients, in-patients, and emergency duties. Pr.: Fourth-year standing in the College of Veterinary Medicine.	L. Beard
CS 774 /D	1/G	Spring	4 th Yr	Advanced Rural Food Animal Business Management	(1). II. An elective course that incorporates economic and food animal practice management skills. Course will focus on business aspects of agricultural industries and skills to manage a food animal practice. Pr.: Fourth-year standing in College of Veterinary Medicine.	White
CS 777	1/CR	Fall, Spring	1 st , 2 nd or 3 rd yr	Practicing Veterinary Medicine in a Multicultural Society Elmore	(1) I, II. Diversity in the broadest sense of the word (cultural, racial, sexual, gender, age, religious, etc.) will be explored in the context of the practice of veterinary medicine. Understanding diversity issues can positively affect the bottom line of nearly every veterinary practice. Pr.: First, second or third year standing in the College of Veterinary Medicine.	Elmore
CS 778	1/G	Fall, Spring	1 st , 2 nd or 3 rd yr	The Basics of Bovine Theriogenology Elmore	(1) I, II. This class is designed to provide students enrolled in the veterinary curriculum a very practical knowledge base regarding bovine reproduction. Pr.: First, second or third year standing in the College of Veterinary Medicine.	Elmore
CS 779	2/G	Spring	3rd yr	Clinical Pharmacology	(2) II. Course focuses on the clinical application of drugs in veterinary species. Clinical pharmacologists and clinicians from multiple clinical specialties will focus on commonly used drugs. Students will be expected to review and build upon their previous pharmacology and medicine courses. Emphasis will be placed on administration (including routes, dosing calculations, and methods), avoiding adverse drug reactions and interactions, evaluating patient response, written and verbal client communication, and utilizing reference resources to select and properly use veterinary therapeutics. Pr.: Third-year standing in College of Veterinary Medicine.	Apley
CS 780	2/G	Fall, Spring	4th yr	Food Animal Reproduction Larson, Huser	(2) I, II. Students will get hands-on experience and become competent performing a complete Breeding Soundness Exam. Other reproductive topics will be covered. Pr.: Fourth-year standing in the College of Veterinary Medicine	Huser
CS 781	2/G	All	4th yr	Shelter Medicine Crauer	(2) I, II, S. The rotation will be a combination of in-class and laboratory exercises in Manhattan, and hands-on experience at regional shelters. Topics include population medicine, infectious	Crauer

					disease recognition and control, surgical sterilization, behavioral testing, and legal issues common to shelter settings. Pr: Fourth-year standing in the College of Veterinary Medicine	
CS 782	1/G	Spring	3rd yr	Equine Medicine Elective L. Beard, Davis	(1) II. This course is designed to be complementary to CS 710. The material presented in this class will focus on diagnostic procedures and case presentations that will not be covered in the core curriculum. Pr.: Third-year standing in College of Veterinary Medicine.	L. Beard/Davis
CS 786	1/G	Fall	2nd or 3rd yr	The Learning Curve of Equine Practice L. Beard, Davis, Rush	(1) I. Elective will cover various aspects of equine practice, not usually covered in traditional didactic lectures. Topics include equine husbandry, communication issues and insurance, horse colors, genetics, and genetic related diseases, aspects of equine practice and practice management, drug and medication rules for performance horses, and preventative medicine. Pr.: 2nd or 3rd year standing in the College of Veterinary Medicine.	L. Beard
CS 787	1/G	Fall	3rd yr	Pain Management McMurphy	(1) I. Course will discuss mechanisms of pain and certain pain syndromes and the drugs and techniques available to provide analgesia. Pr.: Third-year standing in the College of Veterinary Medicine.	McMurphy
CS 788	4/G	Fall 4B/4C	4th yr	Advanced Equine Studies All equine faculty	(4) I. Students will have opportunities for routine and advanced clinical skills training and case management. Course discussions and case presentations will be targeted for the equine interested student and will therefore present advanced material; case discussion and rounds materials will differ from core rotations at other times of the year. Pr.: Fourth-year standing in the College of Veterinary Medicine.	Davis
CS 793	1/G	Spring	CS 721, Surgery I Lab and 3 rd year standing	Surgical Skills W. Beard	(1) II. Manual surgical skills will be taught using surgical models and cadaver tissues. Students will be taught the following skills and techniques: instrument handling, speed and efficiency, hand ties, ligature under tension, suture patterns, closure under tension, anastomosis and enterotomy technique and excision of circular lesions. PR.: CS 721, Surgery I Laboratory and 3 rd year standing in the College of Veterinary Medicine.	W. Beard
CS 794	1/G	Spring	CS 729 Veterinary Surgery I and third-year standing in the College of Veterinary Medicine	Advanced Concepts in Veterinary Clinical Anesthesia	(1) II. The lectures will be divided among topics to enhance student preparation for practical clinical application of anesthetic principles in both small and large animal environments. Topics: anesthetic implications for certain disease states, management of intraoperative complications, and special topics in large animal anesthesia. Pr: CS 729 Veterinary Surgery I and third-year standing in the College of Veterinary Medicine	Mason
CS 795	2/G	Fall, Spring	4 th year standing	Advanced Surgical Experience Klocke, Berke, D Upchurch	(2) I, II, S. Designed to increase exposure to soft tissue surgical theories and techniques by providing both hands on surgical experience on cadavers and literature review skills. Pr: Fourth-year standing in the College of Veterinary Medicine; CS 754	Klocke

CS 796	2/G	Fall, Spring, Summer	4th year standing in the College of Veterinary Medicine	Small Animal Emergency S. Thomason	(2) I, II, S. Enhanced training in the management of small animal patients presented to the emergency service. Evaluation, management, and monitoring of small animal patients in the intensive care unit. Pr.: Fourth-year standing in the College of Veterinary Medicine.	S. Thomason
CS 797	1/G	Spring	2nd year standing in the College of Veterinary Medicine	Intro to Basic Surgical Principles	(1) II. Designed to teach basic surgical principles and techniques. Principles of asepsis, gowning and gloving, instrument identification and use, and basic suturing will be introduced utilizing a combination of online teaching and direct laboratory instruction on models. Provides a strong foundation for entering into the third year surgery laboratory course. Pr.: Second year standing in the College of Veterinary Medicine.	Klocke/ D Upehureh
CS 799	2/G	Fall	4 th Year standing in College of Veterinary Medicine	Advanced Bovine Palpation	(2) I. Provide numerous opportunities for the student to learn how to identify the different structures of the bovine reproductive tract through rectal palpation and transrectal ultrasound, accurately diagnose pregnancy both manually and via ultrasonography, and to identify various bovine reproductive abnormalities. Pre: 4 th Year Standing in the College of Veterinary Medicine. Recommended: CS 811 3 rd year Bovine Palpation Technique & Reproductive Evaluation Elective is strongly encouraged and preference given to those who have taken CS 811 for scheduling.	Huser

PROFESSIONAL/GRADUATE COURSES 800-849 (Given for VM credit for veterinary students and graduate credit with the permission of the instructor for graduate students.) Faculty Senate approves these courses.

# / Type	Credits/ Grading	Offered	Standing	Course	Catalog Description	Coordinator
CS 800 /Var	1-9/ G	All	4th yr	Problems in Medicine or Surgery	(1-9) I, II, S. The course provides for the study of medical or surgical problems. The student, in conference with the major professor, outlines the methodology and procedures, conducts the study, and prepares a detailed report. Pr.: Fourth-year standing in the College of Veterinary Medicine.	Davis

CS 801/C	3/G	All 3 week rotations	4 th yr	Supplemental Small Animal General Medicine E. Chamorro, Artzer, Boyer, Nelson	(3) I, II, S. Additional training in preventative medicine, general practice medicine, and specialty medicine. Pr: Fourth-year standing in the College of Veterinary Medicine	Harkin
CS 802 /C	3/G	All 3 week rotations	4 th yr	Supplemental Clinical Small Animal Soft Tissue Surgery E. Klocke, Renberg, Roush, Berke, D. Upchurch	(3) I, II, S. Additional training in the diagnosis and treatment of small animal soft tissue and general surgical diseases through participation in the Small Animal Soft Tissue Service of the Veterinary Medical Teaching Hospital. Pr.: Fourth-year standing in the KSU College of Veterinary Medicine.	Renberg
CS 803 /C	3/G	All 3 week rotations	4 th yr	Supplemental Small Animal Internal Medicine Harkin, KuKanich, Schermerhorn	(3) I, II, S. Additional topics in internal medicine. The student may be required to participate in a special problem with a written or oral report. Pr.: Fourth-year standing in the College of Veterinary Medicine.	Harkin
CS 806 /C	2/G	All 2 week rotations	4 th yr	Supplemental Equine Studies L. Beard, W. Beard, C. Blevins, Davis, Santschi, Delph	(2-4) I, II, S. An opportunity to pursue additional equine studies (medicine, surgery, etc.) in depth and assume substantial responsibility for care of hospitalized cases. Students will present a seminar on a medicine or surgical subspecialty and pursue a special problem. Pr.: Fourth-year standing in the College of Veterinary Medicine.	L. Beard
CS 811	.5-3/G	All	1 st – 3 rd yr	CS Veterinary Medicine Elective (Various Faculty)	(1-3) I, II. Special topics for veterinary students in the disciplines offered by the department. Lecture or combination lecture with lab. Pr: 1 st , 2 nd , or 3 rd year students in Veterinary Medicine	Davis
Topic	1/G	Fall	1 st , 2 nd yr	Shelter Basics: Medicine and Management	(1) I. This course will acquaint students with the problems associated with overpopulation and the role that veterinarians can play in improving the care of shelter animals. Topics will include population management, infectious disease recognition and control, common HGHVSN techniques, behavioral evaluation and modification, ASV standards of care and much more. Pr: 1 st or 2 nd year students in Veterinary Medicine	Crauer
Topic	1/G	Spring	2 nd yr	Basic Emergency Medicine and Critical Care	(1) II. Students will learn evaluation and triage of the critical/trauma patient, principles of fluid therapy, Acid-Base analysis, oxygenation and oxygen therapy, principles of transfusion therapy, cardiopulmonary resuscitation. The laboratory will be a 4-hour shift in the Veterinary Health Center Intensive Care unit where the students will be exposed to basic skills and protocols in the ICU. Pr: 2 nd year students in Veterinary Medicine	McMurphy
Topic	1/G	Fall, Spring	2 nd , 3 rd yr	Applied Animal Behavior	(1) I, II. Introduction to the commonly encountered small animal behavior topics in veterinary medicine. Students will learn how to address behavior concerns through behavior modification, desensitization, counter conditioning, and psychopharmacology. Pr: 2 nd , or 3 rd year student standing in the College of Veterinary Medicine.	S. Gonzalez

Topic	1/G	Fall, Spring	1 st , 2 nd , 3 rd yr	Equine Podiatry	(1) I, II. This course will teach normal foot anatomy, abnormal foot anatomy, and a working knowledge of the techniques used to correct abnormal foot anatomy. Anatomy and pathologic conditions will be taught by a combination of lectures, autotutorials, and live animal instruction. The student will also learn to safely work on horses feet, properly trim horses' feet, use hoof knives by laboratory sessions devoted to developing these manual skills. The hands on instruction will be provided by veterinarians, experienced farriers, and Veterinarians that specialize in podiatry The student will also become conversant in commonly accepted terminology to be able effectively communicate with farriers. Farrier work is physically demanding. Those wishing to enroll should possess the strength and stamina to hold up and work on horse feet for laboratories lasting up to 4 hours. Pr: 1 st , 2 nd or 3 rd year student standing in the College of Veterinary Medicine	W Beard
Topic	1/G	Spring	3 rd yr	Bovine Palpation Techniques and Reproductive Evaluation	(1) II. In 7 two-hour sessions, students will be instructed through weekly lecture and hands-on labs covering bovine rectal palpation techniques as well as evaluation and manipulation of the female reproductive tract. The labs will utilize teaching models, harvested reproductive tracts, and when available live animals. Objectives of the course will be to provide students with the basic knowledge in reproductive tract scoring, identifying and manipulating ovarian structures, palpating open reproductive tracts, pregnancy diagnosis, fetal aging, obstetrics, and utilization of ultrasound. Pr: 3 rd year standing in the College of Veterinary Medicine	Grady
Topic	1/G	Fall	1 st , 2 nd yr	Business Principles of a Veterinary Practice	(1) I. The course will examine the leadership, management and financial attributes of successful practices. The material will be taught through lectures, readings and discussions. Students will be exposed to concepts including: Emotional Intelligence, Positive Intent, financial metrics, and checklist medicine. Students will learn through case studies which will help to develop their abilities to identify management problems and offer solutions. Pr. 1 st or 2 nd year standing in the College of Veterinary Medicine	Schwartz
Topic	1/G	Spring	3 rd yr	Advanced Zoological/Wildlife Medicine	(1) I. Lectures on the diseases/pathology, medicine, immobilization procedures, and captive management of a variety of zoo/wild animals. Includes 2 Saturday morning labs (2-3 hr each) and a 1-day Saturday field trip to the Rolling Hills Zoo (Salina) to participate in veterinary procedures and rounds. Individual mentoring of students will also be offered. Pr. 3 rd year standing in the College of Veterinary Medicine	Carpenter
Topic	1/G	Spring	1 st , 2 nd , 3 rd yr	Issues in Rural Practice	(1) I. The goal of this course is to provide veterinary students information on current issues impacting success in rural veterinary practice. Emphasis will be placed on including topics relevant to rural veterinary practices and can include topics such as veterinary business management, rural community development, changes in agricultural trends, and business development. This course will include a variety of topics affecting rural veterinary practice and the format is a short didactic lecture each week followed by facilitated discussion with the students. Speakers will include KSU CVM faculty, KSU faculty from other departments, and experts from outside KSU. Each presentation will describe an issue impacting rural practice and be followed by a question/answer and discussion session among students and guest	Brad White

					speaker. Pre: 1 st , 2 nd , 3 rd year standing in the College of Veterinary Medicine	
CS 818 /C	3/G	All 3 week rotations	4 th yr	Supplemental Clinical Small Animal Orthopedic Surgery Renberg, Roush, Berke	(3) I, II, S. Additional training in the diagnosis and treatment of small animal orthopedic surgical diseases through participation in the Small Animal Orthopedic Service of the Veterinary Medical Teaching Hospital. Pr.: Fourth-year standing in the KSU College of Veterinary Medicine.	Renberg
CS 822 /C	2-4/G 3 credits 2010-11	All 3 wk rotations except 3D, 4E, 6D, 7D, 8D	4th yr	Exotic Animal, Wildlife, and Zoo Animal Medicine Carpenter, Eshar	(2-4) I, II, S. Study of exotic, wildlife, and zoo animal medicine through participation in the clinical service in the Veterinary Medical Teaching Hospital. Problem solving, differential diagnosis, diagnostic procedures, and medical and surgical therapy of non-domestic animals will be emphasized. Pr.: Fourth-year standing in the College of Veterinary Medicine.	Carpenter
CS 823 /C	3/G	All	4 th yr	Companion Small Animal Medicine Harkin	(3) I, II, S. Additional elective studies of preventative medicine, general practice medicine, and specialty medicine. Emphasis on animal behavior, canine theriogenology, and general practice experience. The student may be required to participate in a special problem with a written or oral report. Pr.: Fourth-year standing in the College of Veterinary Medicine.	Harkin
CS 825	1-4/CR	All	1st, 2nd, 3rd or Grad	International Veterinary Study Tours Various Faculty [Distance course coordinated through OIP: Office of Internat'l Programs]	(1-4) I, II, S. Faculty-led trip for students to explore veterinary medicine in a foreign country. Prior to travel, students will learn about the country through lectures, research, presentations. During the trip they will interact with nationals in the veterinary profession and experience the culture. Pr.: Enrolled as a 1 st -3 rd year or grad student in the College of Vet Med. Additional students admitted with discretion of faculty leading the tour.	Renberg
CS 827	2/G	All	1st, 2nd, 3rd yr or Grad Student	Health and Management of Llamas and Alpacas – Distance Course (Not for KSU veterinary students)	(2) I, II, S. This course will provide detailed information regarding nutrition, herd health, breeding management, medicine, neonatal care, and surgical problems of llamas and alpacas. Pr.: 1st, 2nd or 3rd-year standing in a College of Veterinary Medicine or enrolled as a graduate student.	
CS 828	2/G	Spring	3 rd -yr or grad stud	Veterinary Management of Sheep and Goats	(2) II. Course content is delivered both as online seminars via KSOL and case-based discussions and problem solving exercises in the classroom on herd management, preventative health care, nutrition, medicine, diseases, reproduction, and surgery of sheep and goats. Pr.: 3rd year standing in College of Veterinary Medicine or graduate student on the Manhattan campus of Kansas State University.	
CS 829	1/G	All	2 nd , 3 rd yr vet stud or grad student	Veterinary Management of Small Ruminants a Distance (DCE) course K-State vet students are not allowed to take this course.	(1) I, II, S. Course content is provided entirely online as seminars delivered via distance education in KSOL on herd management, preventative health care, nutrition, medicine, diseases, reproduction, and surgery of sheep and goats. Pr.: 2nd or 3rd year standing in a College of Veterinary Medicine other than KSU or graduate student.	

CS 831	1/CR	Fall	CS715 Radiology, 3 rd yr standing	Veterinary Ultrasonography	(1) I. Course content will be delivered both as online seminars via KSOL and case-based discussions. The physics, principles of use, and common artifacts of ultrasound will be covered as it relates to veterinary diagnostic imaging. Ultrasound imaging of the thorax (non-cardiac), abdomen, musculoskeletal system, and other areas (eye, thyroid/parathyroid) will be covered, predominantly in small animals. The course will cover both normal and pathologic ultrasound findings. Pr: CS715 Radiology, 3 rd year standing in the College of Veterinary Medicine or graduate student on the Manhattan campus of Kansas State University.	
CS 832	2/CR	Spring	2 nd /3 rd yr standing or Grad Student	Communication with the Agricultural Worker White	(2) II. An elective course focused on improving the communications between veterinarians and animal caretakers in production agriculture and equine industries. The course will use face to face discussions and online seminars in KSOL to teach communications skills with a focus on common terminology and vocabulary necessary for effective communication. Audio-visual teaching utilizing immersion philosophy is utilized to provide the material course work. PR.: 2 nd or 3 rd year standing in the College of Veterinary Medicine or graduate student.	White

GRADUATE COURSES 850-900 (Given for graduate credit only)

# / Type	Credits/ Grading	Offered	Standing	Course	Catalog Description	Coordinator
CS 850 /O	1-6 /CR	All	Consent	Research in Medicine	(1-6) I, II, S. An attempted solution of some of the medical and parasitological problems confronting the practitioner of veterinary medicine. Pr.: Consent of staff.	Davis
CS 851 /D	1-5/G	All	DVM or consent	Breeding Diseases	(1-5) I, II, S. Advanced studies of the breeding diseases of domestic animals. Pr.: DVM degree or consent of staff.	Davis
CS 852 /D	3/G	Fall- Odd yrs	DVM or consent	Interpretation of Radiology Studies of Body Systems Biller	(3) I. Advanced discussions of radiologic interpretation, indications and interpretation of alternate imaging procedures (MRI, CT, nuclear medicine, ultrasound). Pr.: DVM degree or consent of department head prior to registration.	Biller
CS 854 /D	1-3/G	All	DVM or consent	Systemic Medicine I	(1-3) I, II, S. Study of the medical aspects of diseases of the urinary, nervous, and integumentary systems, and special senses. Pr.: DVM degree or consent of department head.	Harkin
CS 855 /D	1-3/G	Fall	DVM or consent	Systemic Medicine II	(1-3) I. Study of the medical aspects of diseases of the special senses, cardiovascular, respiratory, musculoskeletal, and endocrine systems. Pr.: DVM or consent of department head.	
CS 857 /O	1/CR	Fall Spring	DVM or consent	Clinical Interpretation of Equine Diagnostic Images	(1) I, II. Graduate veterinary students will meet one hour weekly to review clinical equine images and review pertinent literature. Pr.: Graduate student in the College of Veterinary Medicine.	Santschi
CS 858 /O	4/G	Spring, every 3 rd yr – offered next in Spring 2016	DVM or consent	Orthopedic Surgery Renberg, Roush	(4) II. Fundamentals, theory, and practice concerning genetic metabolic, infectious, neoplastic and traumatic diseases of bones and joints. Pr.: DVM degree or consent of department head.	Roush
CS 859 /O	1/G	Fall Spring		Clinical Sciences Seminar All House Officers	(1) I. II. A required seminar for all house officers and graduate students in the Department of Surgery and Medicine. One-hour conference weekly. May re-enroll for a total maximum of two credits.	Renberg

CS 867 /O	1/CR	Fall	Grad Student	Advanced Diagnostic Imaging - Small Animal Biller	(1) I. Case presentation/discussion of diagnostic imaging techniques used in small animal veterinary practice, including radiography, ultrasonography, nuclear imaging, magnetic resonance imaging, and computer tomography. Clinical cases will demonstrate imaging methods and technology used in the various body systems, with an emphasis on interpretation and clinical diagnosis. Pr.: DVM degree. Students may re-enroll for a maximum of three credits.	Biller
CS 868 /D	1/CR	Fall	DVM or consent	Topics in Small Animal Internal Medicine I Harkin	(1) I. Various topics in small animal internal medicine will be presented. Different topics will be covered in various years at instructor's discretion. In depth discussion of pathophysiology and recent advances in diagnostics and therapeutics. Course may be repeated with approval of instructor. Pr.: DVM Degree	Harkin
CS 869	1/G	Spring	DVM	Topics in Small Animal Internal Medicine II	(1) II. Various topics in small animal internal medicine will be presented. One topic will be covered in a one-hour conference weekly. In-depth discussion of pathophysiology and recent advances in diagnostics and therapeutics. Course may be repeated with approval of instructor. Pr.: DVM Degree	Harkin
CS 870 /C	3/G	Summer	2 nd yr & 3.0 GPA	Diagnostic Methods in Feedlot Management Kennedy This course is cross listed with the Diagnostic Medicine/Pathobiology (DMP 810) proposed course.	(3) S. Practical experience in feedlot operation and bovine necropsy diagnosis consisting of 40 hours in bovine necropsy and 320 hours of an on-location practicum in a cattle feedlot. Pr.: Successful completion of the first-year professional curriculum in the College of Veterinary Medicine with a cumulative GPA of 3.0 or better and no grade below a C.	Thomson
CS872 /D	1/CR	Fall	DVM	Introduction to Small Animal Endoscopy Renberg	(1) I. Introduction to the fundamentals of small animal (canine and feline) endoscopy, including respiratory, gastrointestinal, endoscopy, laparoscopy, and arthroscopy. Thirteen lectures with 2 laboratories will be offered. Offered Fall Semester only. Pr.: DVM degree and approval from course coordinator.	
CS 873	Var/CR	Fall, Spring	DVM or consent	Advanced Topics in Small Animal Surgery Renberg, Roush	(Var) I, II. Current and foundational information on techniques, theory, and management in small animal surgery. Pr.: DVM degree or approval of instructor.	Renberg
CS 878 /D	2/G	Fall (every 3 years)	DVM	Wound Healing W. Beard	(2) I. Didactic lectures on the science of wound healing physiology and on the clinical application of wound healing principles. Laboratory sessions will be incorporated to cover the principles of reconstructive surgery. Pr.: DVM degree	W. Beard
CS 879 /D	1/G	Fall, Spring	Grad Student	Applied Production Medicine Dritz, Larson, Renter, Sanderson, White	(1) I, II. Advanced training in agricultural production medicine research. Emphasis on answering production medicine problems through the appropriate design and interpretation of research models. Course is discussion-based and facilitated by a team of faculty members. Students will be expected to participate in weekly topic discussions. Pr.: Graduate Student.	White

CS 880	3/G	Spring	Grad Student	Design and Interpretation of Production Livestock Field Trials Larson, White	(3) II. Veterinarians and other professionals are often called upon to test hypotheses in livestock production settings. The design and interpretation of these types of studies requires developing an understanding of the constraints and opportunities offered by a field research setting. This course will prepare students to design appropriate studies to answer research questions that can be addressed in production settings, and to interpret and present the results in a suitable manner.	Larson
CS 881	3/G	Spring	Ophtho Resident at KSU VHC	Veterinary Ophthalmic Surgery Techniques A.Rankin	(3) II. Lectures will cover ophthalmic instruments and proper surgical techniques for commonly performed ophthalmic surgeries. Cadavers will be available to practice adnexal and corneal ophthalmic surgeries. Pr.: Ophthalmology resident at Kansas State University Veterinary Health Center.	A. Rankin
CS 882	2/G	Spring - every 3 yrs	DVM Degree	Advanced Small Animal Endocrinology	(2) II. Advanced topics in small animal endocrinology. Emphasis on comparative aspects of endocrine gland disease and its clinical manifestations in dogs and cats. Primary literature, review articles, and advanced texts will be the principle source of information. Pr.: DVM Degree.	Schermerhorn
CS 883	2/GR	Spring – every 3 yrs	Grad Student	Nephrology/Urology	(1) II. Advanced studies about small animal nephrology/urology (various topics: Pathophysiology, clinical signs, differential diagnoses, diagnostic approach, and treatment consideration). Pr: DVM Degree and Graduate Student	
CS 884	1/CR	All	Sx Resident at KSU VHC and Grad Student	Surgical Pathophysiology I – Hematology, Anesthesia and Infection	(1) I. II. S. Designed to expose small animal surgery residents to a standard curriculum set out by the American College of Veterinary Surgeons in preparation for the Phase I Surgery Qualification examination. Assigned textbook reading covers various topics: Hematology, Anesthesia and Infection. Meet for one hour weekly with faculty to guide the resident’s self-study, answer questions, and correct deficiencies. Pr: Surgery resident at Kansas State University Veterinary Health Center and Graduate Student	Roush
CS 885	1/CR	All	Sx Resident at KSU VHC and Grad Student	Surgical Pathophysiology II – Analgesia and Wound Management	(1) I. II. S. Designed to expose small animal surgery residents to a standard curriculum set out by the American College of Veterinary Surgeons in preparation for the Phase I Surgery Qualification examination. Assigned textbook reading covers various topics: Analgesia and Wound Management. Meet for one hour weekly with faculty to guide the resident’s self-study, answer questions, and correct deficiencies. Pr: Surgery resident at Kansas State University Veterinary Health Center and Graduate Student	Roush

CS 886	1/CR	All	Sx Resident at KSU VHC and Grad Student	Surgical Pathophysiology III – Soft Tissue Surgery	(1) I. II. S. Designed to expose small animal surgery residents to a standard curriculum set out by the American College of Veterinary Surgeons in preparation for the Phase I Surgery Qualification examination. Assigned textbook reading covers Soft Tissue Surgery topics. Meet for one hour weekly with faculty to guide the resident's self-study, answer questions, and correct deficiencies. Pr: Surgery resident at Kansas State University Veterinary Health Center and Graduate Student	Roush
CS 887	1/CR	All	Sx Resident at KSU VHC and Grad Student	Surgical Pathophysiology IV – Orthopedic and Neurosurgery	(1) I. II. S. Designed to expose small animal surgery residents to a standard curriculum set out by the American College of Veterinary Surgeons in preparation for the Phase I Surgery Qualification examination. Assigned textbook reading covers various topics: Orthopedic and Neurosurgery. Meet for one hour weekly with faculty to guide the resident's self-study, answer questions, and correct deficiencies. Pr: Surgery resident at Kansas State University Veterinary Health Center and Graduate Student	Roush
CS 890 /O	Var/GR	All	Grad Student	Clinical Science Problems	(1-3) I, II, S. Advanced instruction in research topics and technologies, emphasizing various clinical disciplines. Pr.: DVM degree or dual degree student in the College of Veterinary Medicine.	Davis
CS 895 /O	1/G	Fall - Odd yrs	Grad Student	Research Methods Mason, Roush, invited faculty	(1) I. Discussion of research design, grantsmanship, practical statistics, manuscript preparation, and ethics. Pr.: DVM degree or consent of department head.	Davis
CS 899 /O	1-6 /CR	All	Grad Student	Thesis Research/Clinical Sciences L. Beard, W. Beard, Davis	(1-6) I, II, S. Individual research in any of the fields of Clinical Sciences. Pr.: Graduate standing. This work may form the basis for the MS Thesis or the MS Report.	Davis

Temporary courses offered under CS 800

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Temporary graduate student courses previously offered under CS 890

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Courses from other departments which our faculty team teach

DMP 759 /D	2/G	Spring	2 nd yr	Laboratory Animal Science Olson	(2) II. Management and health of common species of laboratory animals. Pr: DMP 715	S. Olson
DMP 825 /C	3/G	Fall	4 th yr	Dairy Production Medicine	(3) I. This course will be conducted using both in-class discussions and field experiences on Kansas dairies. The discussion portion will incorporate about 60% of class time, and field experiences 40%. Pr. 4 th year standing in the College of Veterinary Medicine	Hanzlicek
AP 770 /D	4/G	Fall	2 nd yr	Pharmacology CS Faculty participation by invitation of course director. Apley, Davis, Gehring, Harkin, Mason, McMurphy, Renberg, Schermerhorn	(4) I. The basic principles of pharmacology, the interactions of drugs and living systems including fundamental principles of pharmacokinetics, pharmacodynamics, receptor-coupling, and mechanisms of action. A systems-based approach to drug classes will be emphasized. Four hours of lecture a week. Pr: AP 737 and 747 or equivalent.	B. KuKanich
DVM 700/D	Zero credit	Fall	1 st yr	Veterinary Career Development	(0)I. Introduction to career opportunities in veterinary medicine. (A required zero-credit class, no tuition is charged, class does not show up in the catalog)	Elmore
DVM 704/D	1/C	Fall	3 rd yr	Ethics and Jurisprudence	(1) I. Socratic ethics are discussed along with the American Veterinary Medical Association's Code of Ethics and practical situations with a fundamental ethical basis. The Kansas Practice Act is explored as an example of governance in veterinary medicine. The role of animals in humans' well being is addressed along with the philosophy of animal welfare. The law and the practicing veterinarian are discussed with emphasis upon professional liability. Pr.: Third year standing in College of Veterinary Medicine.	Roush
DVM 710/D	1/CR	Fall	1 st yr	Veterinary Clinical and Professional I	(1) I. The course will be taught during the fall semester as a required introductory level course for first year veterinary students. This is the first in a series of foundational courses designed to introduce students to key clinical skills, including communication and critical thinking, that they will encounter in a clinical setting and to provide students with a problem-based approach to learning.	Englar
DVM 711/D	1/CR	Spring	1 st yr	Veterinary Clinical and Professional II	(1) II. The primary objective of the course is to provide students with an opportunity to learn normal animal behavior for the most commonly evaluated large animal species in clinical practice (the horse and the cow); to safely handle and restrain them; and to practice basic physical examination skills. A secondary objective of the course is to introduce students to the basic principles of biosecurity, sterile technique, venipuncture, and intravenous catheterization.	Englar

					<p>In addition, students will build onto first-semester instruction in clinical communication, written documentation within the medical record, and introductory surgical skills.</p> <p>The course will include introductory lectures as well as structured and self-directed laboratory sessions that will involve both live animals and non-animal teaching models.</p>	
DVM 712 /D	1/CR	Fall	2 nd yr	Veterinary Clinical and Professional III	(1) I. A continuation of Veterinary Clinical and Professional Skills II. Introduces how to perform common diagnostic tests in clinical practice and interpret them. Builds upon basic palpation skills to practice isolating specific tissues and organs. Applies surgical principles to the practice of advanced suture patterns.	Englar
DVM 713 /D	1/CR	Spring	2 nd yr	Veterinary Clinical and Professional IV	(1) II. A continuation of Veterinary Clinical and Professional Skills III. Introduces advanced organ-specific examination techniques including otoscopy and ophthalmoscopy. Expands the concepts of diagnostic testing and diagnostic test interpretation. Prepares students for surgical anesthesia and anesthetic monitoring through the use of non-animal teaching models.	Englar

-----Approved Courses NOT currently offered-----

CS 720 /D*	1/CR	Summer	4th yr	Supplemental Equine Theriogenology	(1) I. An in-depth exposure to methods of maximizing reproductive efficiency in the mare and the stallion. Advanced equine reproductive physiology, diagnostics, and therapeutics are emphasized. Pr.: Fourth-year standing in the College of Veterinary Medicine.	
CS 732 /D*	1/C	Fall	4th yr	Diagnostic Techniques in Equine Medicine Davis, Rush, L. Beard	(1) II. This elective course emphasizes the techniques needed for internal medicine. 12 lectures, 3 labs (covering endoscopy, BAL, TTW, V/S, spinal tap, epidural) emphasize skills, indications, and complications. Pr.: Fourth-year standing in the College of Veterinary Medicine.	L.Beard
CS 736 /D*	1/C	Summer	4th yr	Pleasure Horse Medicine Davis, other equine faculty	(2) I. In-depth exposure of most frequent concerns encountered by the equine practitioner. Topics will be addressed as problems rather than specific diseases. Management, differentials, diagnosis and therapy will be emphasized. Lectures 4 hours per week, no laboratory sessions. Pr: fourth year standing in College of Vet. Med.	Davis
CS 758 /C	1/C	Spring	4 th yr	Equine Lameness II	(1) II. A continuation of Equine Lameness I. This course will complete the review of the most common lameness problems in horses. 12 lectures, 3 labs. Pr: CS 757.	

CS 764 /D	1/G	Fall, Spring	3 rd yr	Beef Cattle Breeding Evaluation	(1) I, II. Female breeding soundness and pregnancy detection in beef cattle through rectal palpation with and without ultrasound technology. Some discussions of infectious diseases that impair reproduction. 3-hour lab each week. Pr.: Third-year standing in College of Veterinary Medicine.	
CS 765	3/G	Fall	4 th yr	Advanced Food Animal Practice	(3) I. Emphasizes more advanced training and integrated Food Animal Practice. This elective should be first choice when seeking Supplemental Food Animal experience. Special activities will be arranged during this rotation.	
CS 776 /D	1/G	Spring	3 rd yr	Advanced Urinary	(1) II. This elective builds on the case-based urinary section of CS 711. Focus of this class will be on disease pathophysiology and treatment. Pr.: Third year standing in the College of Veterinary Medicine.	
CS 785	3/G	Fall	1st, 2nd, 3rd yr	Veterinary Care and Management of South American Camelids [Format is 1 hr in classroom, 2 hrs viewing online lectures that are discussed in class]	(3) I. This course will provide detailed information regarding nutrition, herd health, breeding management, medicine, neonatal care, and surgical problems of llamas and alpacas. Lab required. Pr.: 1st, 2nd or 3rd-year standing in the College of Veterinary Medicine at Kansas State University.	
CS 812 /D*	1/CR	Spring – Odd yrs	3 rd or 4 th yr	Production Medicine of Small Ruminants	(1) II. Lectures and other exercises emphasizing production medicine of small ruminants. Pr.: Third or Fourth-year standing in the College of Veterinary Medicine.	
CS 814 /C	3/G	All	4 th yr & CS 724	Veterinary Diagnostic Imaging II	(3) I, II, S. Students will receive advanced training in radiologic interpretation and alternate imaging procedures. Emphasis will be on didactic and hands-on training in ultrasound imagin. Pr.: CS 724.	
CS 821 /D*	1/CR	Spring – Even years	3rd or 4th yr	Vet Medicine for South American Camelids Miesner	(1) II. The health concerns of South American Camelids are presented in terms of medicine, surgery, theriogenology, and associated disciplines. Pr: third or fourth year standing in the College of Veterinary Medicine, DVM degree.	Miesner

Course Type

C: Clinical
D: Didactic
O: Other (Externs & Grad Study)

Grading

CR: Credit/No Credit (counts on hours, but has no effect on GPA)

G:A-F Grade

GA: Pass/Fail or A-F (A or F shows on GPA; B,C, or D counts on hours but not on GPA. Only students know if they signed up for it this way – instructor cannot know.) This can be an option but can't be the only grading option offered for the class (per Sharon at Enrollment Svc)

Red Highlight = Courses going through the approval process.

I: Fall II: Spring S: Summer

Purple = Proposed course changes, going through expedited approval process.