

PROFESSIONAL 600-699 Courses

# / Type	Credits/ Grading	Offered	Standing	Course	Catalog Description	Coordinator
CS 611	2/G	Spring (2010)	General Univ. course	Cow-Calf Health Systems	(2) II. Management of animal well-being and efficient production in a cow-calf system. Includes the areas of health, marketing, growth, nutrition, economics, pharmaceutical management, genetics, and reproduction.	Larson/White
CS 610	2/G	Fall (2009)	General Univ. course	Feedlot Health Systems	(2) I. Health of cattle in a commercial feedyard. Includes health risk assessment, cattle handling, processing, vaccination protocols, identification/treatment of sick cattle, necropsy techniques, using computer data to make management decisions for feeder cattle, other management issues. Discussion of disease syndromes and foreign diseases.	Thomson

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 (Fall in 2011)	3rd yr	Medicine I Borgarelli, Harkin, Margiocco, Schermerhorn, Stenske	(4) I (Offered in Spring 2010 to 2nd year). Consideration of medical and pathophysiologic aspects of diseases affecting the musculoskeletal, respiratory, cardiovascular special senses, nervous, hemic and lymphatic systems. Four hours lec. a week. Pr.: Third-year standing in the College of Veterinary Medicine.	Harkin
CS 710 /D	4/G	Spring	3rd yr	Medicine III Allbaugh, L. Beard, Blevins, Davis, Rush	(4) II. A study of the etiology, clinical signs, diagnosis, treatment, and control of infectious or contagious diseases which affect horses. Four hours lecture a week. Pr.: CS 709 and CS 711.	Rush
CS 711 /D	4/G	Fall	3rd yr	Medicine II Allbaugh, Bagladi, L. Beard, Grauer, Harkin, Higginbotham, McCaw, A. Rankin	(4) I. Consideration of the medical and pathophysiological aspects of diseases affecting the gastrointestinal, endocrine, urinary, integumentary systems. Four hours lec. a week. Pr.: Third-year standing in the College of Veterinary Medicine.	Harkin
CS 712 /D	4/G	Fall	3rd yr	Food Animal Medicine Allbaugh, Anderson, Apley, Coetzee, Gehring, Jones, Laflin, Miesner 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.	Anderson
CS 713 /D	2/G	Spring	3rd yr	Production Medicine Coetzee, Laflin, Larson, Rush, Thomson, West Other Team Teachers: Dritz	(2) 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 service that veterinarians provide to beef feedlot, cow/calf, swine, dairy, equine and dog kennel segments of animal production. Pr.: Third-year standing in the College of Veterinary Medicine.	White

CS 714 /D	3/G	Spring	3rd yr	Clinical Nutrition M. Jones, Thomson Others: MMI, Meuller, Wileman	(3) II. The clinical aspects of nutrition as it relates to (a) medical and surgical management of diseased and convalescent animals (therapeutic nutrition), and (b) programs of disease prevention of the common domestic species of food- producing, companion animals, pet birds, and exotic animals (nutritional preventative medicine). Same as ASI 886 and AP 886. Pr.: Third-year standing in the College of Veterinary Medicine.	Thomson
CS 715 /D	3/G	Spring	2nd yr	Radiology Armbrust, Biller	(3) II. The theory and principles of x-rays, production and interpretation of radiographs and exposure factors, special 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.	Biller
CS 724 /C	3/G	All 3 week rotations	4th yr	Veterinary Diagnostic Imaging I Armbrust, Biller	(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	2-3/CR	5E for 2 credits 7E for 3 credits	4 th yr	Advanced Dairy Production Management UC Davis	(2-3) I, II, S. For students desiring dairy production training. Emphasis will be on monitoring disease, preventative medicine, metabolic disorders and reproductive management. Replacement heifer nutrition and management will be addressed.	Thomson/Apley
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.	Rush
CS 726 /O	2 or 4/CR	2 credits offered all rotations except 1A&B, 3A&B, 5A&B, 7A&B, 8A&B which are 4 credit rotations	4 th yr	MidWestVET (Omaha)	(2 or 4) I, II, S. MidWestVet is a private, small animal, referral only practice and is an affiliate program of the KSU VMTH. Students will complete one week at the MWV clinic and one week will be chosen by the student as long as there is availability. There will be student training opportunities at the Animal Emergency Clinic (AEC), Bellevue Animal Hospital, Veterinary Eye Specialists and/or the Omaha Zoo. If the MWV rotation is taken for 4 weeks, students will participate at the Nebraska Humane Society for 2 consecutive weeks (only 10 spots available). This will be an exciting learning environment for all students who participate. Housing will be provided but transportation to/from Omaha and food will be the student's responsibility.	Fingland
CS 727 /C	2/G	All 2 week rotations	4th yr	Ophthalmology Allbaugh, A. Rankin	(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	A. Rankin

					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.	
CS 728 /D	3/G	Spring	3rd yr	Theriogenology Coetzee, Ferrer, Laflin, Larson	(3) II. Consideration of prevention, diagnosis, and treatment of disease, and maintenance of health and productivity of the genital tract of domestic animals. Three hours lec. a week. Pr.: Third-year standing in College of Veterinary Medicine.	Larson
CS 729 /D	5/G	Fall	3rd yr	Veterinary Surgery I Hodgson, E. Klocke, Mason, D. Rankin, Renberg, Roush, Towle	(5) 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 and 1 lab per week. Pr.: Third-year standing in College of Vet Med.	E. Klocke
CS 730 /D	5/G	Spring	3rd yr	Veterinary Surgery II Anderson, Apley, W. Beard, Hodgson, Laflin, Lillich, Mason, Miesner	(5) 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. Four hours lec and 1 lab per week. Pr.: Third-year standing in College of Vet Med.	Lillich
CS 737 /D	3/G	Fall	3 rd yr	Zoological Medicine Allbaugh, Carpenter, West Others: Dryden, Okesson	(3) I. Study of the diseases, medicine, and captive management of non-traditional species, including: companion birds, reptiles, rabbits, ferrets, and rodents; wildlife; and zoo animals. Three hours lecture per week. Pr.: Third-year standing in the D.V.M. degree curriculum.	Carpenter
CS 738 /C	2/G	All 2 week rotations	4th yr	Clinical Oncology Higginbotham, McCaw	(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.	McCaw
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 1/C	1/CR	Spring	3 rd Yr	Topics in Emergency Medicine McMurphy (25 student max.) (offered in Spring 2008 & Spring 2009)	(1) II. 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.	McMurphy
CS 741 /D (DVM 702)	1/CR	Fall, Spring	3 rd yr	Veterinary Practice Management (Last offered Spring 2007)	(1) I, 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.	
CS 742 /D	0-1/CR	Fall and Spring	3 rd yr	Clinical Skills Various CS Faculty (New credits/semester approved 2/2/10 by grad council)	(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.	Davis/Grauer
CS 746 /C	2/G	Spring, Summer Offered only 1A, 1B, 1C, 8C, 9A and 9B	4 th yr	Clinical Equine Theriogenology Ferrer	(2) II, S. Students will participate in the daily activities of the College's equine theriogenology practice both in house and in the field. Routine procedures will provide an opportunity for students to develop their skills in handling horses, rectal examinations, ultrasonography, stallion semen collection, evaluation, artificial insemination, uterine therapies and minor surgical procedures. Postpartum and neonatal foal examinations will be performed. The student will have the opportunity to evaluate reproductive records on a breeding farm and acquaint him/herself with diverse management practices. Pr.: Fourth-year standing in the College of Veterinary Medicine or DVM degree.	Ferrer
CS 747 /D	2/G	Spring	3 rd yr Offered in 2009?	Systems Integration of Small Animal Internal Medicine Harkin (Not offered 2007)	(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 Local Practice Laflin, M. Jones	(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.	Laflin
CS 749 /C	2/G	All 2 week rotations	4 th yr	Food Animal Medicine & Surgery Anderson, Jones, Laflin, Miesner	(2) I, II, S. A study of individual food animal medicine and surgery. Students will work under faculty supervision in an in-house setting. Pr.: Fourth-year standing in the College of Veterinary Medicine.	Anderson

CS 750 /C	2/G	All 2 week rotations	4 th yr	Equine Medicine L. Beard, Davis, Ferrer, Rush	(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.	Davis
CS 751 /C	2/G	All 2 week rotations	4 th yr	Equine Surgery W. Beard, Ferrer, Lillich	(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 Veterinary Medicine.	Davis
CS 752 /C	3/G	All 3 week rotations	4 th yr	Small Animal Internal Medicine Grauer, Harkin, Schermerhorn, Stenske	(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 Akers, Artzer, L. Blevins, 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, Towle	(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.	Roush
CS 755 /C	3/G	All 3 week rotations	4 th yr	Clinical Small Animal Orthopedic Surgery N. Klocke, Renberg, Roush	(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.	Roush
CS 756 /C	2/G	All 2 week rotations except 1C	4 th yr	Comparative Cardiology Borgarelli, Margiocco	(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.	Borgarelli
CS 759 /D New- Pending	1/G	Spring (2011)	3rd yr	Advanced Exotic Pet Medicine/Introduction to Zoological Medicine Elective Carpenter, West	(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/CR	Spring	2 nd and 3 rd yr	Topics in Global Veterinary Medicine Renberg (offered 2006 & 2007)-will be offered every other year.), 2007, 2009, etc. Offered 2009	(1) II. Topics in Global Veterinary Medicine will provide an overview of the role veterinarians can and do play in the world. The student will gain an appreciation for the importance of veterinarians and the wide range of activities in which they participate. Students should gain an understanding of the varying uses and attitudes about animals around the world. Students will gain an understanding of some of the difficulties the world faces pertaining to livestock production, animal use and social tensions. The student should be better prepared at the conclusion of the course to engage in discourse or active participation on a variety of globally relevant veterinary topics.	Renberg
CS 761 /C	2/G	All 2 week rotations	4 th yr	Supplemental Food Animal Local Practice Jones, Laflin	(2) I, II. Additional 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.	Laflin
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.: Fourth-year standing in the College of Veterinary Medicine.	Rush
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.	Laflin
CS 766 /O	1/CR	All	1 st , 2 nd and 3 rd yr	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 completed orientation training and have expressed an interest in training and mentoring veterinary students. To be completed during the first 3 years of veterinary school, prior to entering the 4 th year.	Elmore/Rush
CS 767 /O	1/CR	All	1 st , 2 nd and 3 rd yr	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 completed orientation training and have expressed an interest in training and mentoring veterinary students. To be completed during the first 3 years of veterinary school, prior to entering the 4 th year.	Elmore/Rush

CS 768 /O	1/CR	All	1 st , 2 nd and 3 rd year	Non-Traditional Practice Mentorship	(1) I,II,S. Structured one week (45 contact 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 have completed orientation training and have expressed an interest in training and mentoring veterinary students. To be completed during the first 3 years of veterinary school, prior to entering the 4 th year.	Elmore/Rush
CS 769 /D	2/G	Summer and Fall Offered 2A and 4C	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 - Summer Thomson – Fall
CS 770 /D	2/G	Summer & Spring Offered 1C and 8B	4 th yr	Advanced Cow-Calf Production Management Larson, Sanderson, 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 772 /C	2/G	All 2 week rotations	4 th yr	Equine Field Service C. Blevins	(2) I, II, S. This course will offer general exposure to equine field service. 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.	Davis
CS 773 /D	1/G	Spring (maybe 2011)	3 rd Yr	Introduction to Veterinary Phytotherapy Gehring	(1) II. Fundamentals of phytotherapy: traditions of herbal medicine, evaluating research, regulation of products, interactions with conventional drugs, introduction to medical botany, conserving medicinal plant species, issues using medicinal plants within evidence-based veterinary medicine. Pr.: AP 770, DMP 801, Third-year standing in College of Veterinary Medicine.	Gehring
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 775 /O	1-2/CR	All	4 th Yr	Primary Care Externship	(1-2) I, II, S. Externships emphasizing primary care for small animal, large animal or mixed species at an approved location. Facility must have a veterinarian on-site all day, every day. Pr.: Fourth-year standing in the College of Veterinary Medicine	Rush
CS 776 /D	1/G	Spring	3 rd yr	Advanced Urinary Grauer Offered as CS 800 Spring 2010	(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.	Grauer
CS 777	1/CR	Fall and 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 and 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 New-Pending	2/G	Spring (2012)	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 782 New-Pending	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 783 New-Pending	1/G	Fall (2011)	3rd yr	Theriogenology Elective	(1) I. Students can choose to take the 5-week block either equine, canine and feline theriogenology or livestock theriogenology, depending on which species was not selected during the core theriogenology course.	Larson
CS 784 New-Pending	2/G	Spring	4th yr and taken CS 754 prior to this course	Advanced Soft Tissue Surgery (Offered Spring 2011)	(2) II. Increase student exposure to soft tissue surgical theory, techniques and importance of veterinary literature in practice. Course will provide practical, hands-on surgical experience that mimics small animal general practice by utilizing both cadavers and appropriate clinical cases. Course allows students interested in surgery in private practice or those considering internship and residency training an opportunity to further explore the field. Pr.: Fourth-year standing in College of Veterinary Medicine and must have completed CS 754 prior to participating in this course.	E. Klocke
CS 785 New-Pending	3/G	Fall	1st, 2nd, 3rd yr	Veterinary Care and Management of South American Camelids – Online Course Anderson	(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.	Anderson
CS 788 New-Pending	4/G	Fall	4th yr	Advanced Equine Studies	(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

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.	Rush
CS 802 /C	3/G	All 3 week rotations	4th yr	Supplemental Clinical Small Animal Soft Tissue Surgery E. Klocke, Renberg, Roush, Towle	(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.	Roush
CS 803 /C	3/G	All 3 week rotations	4th yr	Supplemental Small Animal Internal Medicine Grauer, Harkin, Schermerhorn, Stenske	(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	2-4/G (Variable 2-4 credits)	All 2 week rotations, offered 4B/4C as 4 credit to Class 2011	4th yr	Supplemental Equine Studies L. Beard, W. Beard, C. Blevins, Davis, Lillich, Rush	(2-4) I, II, S. An opportunity for students to pursue additional equine clinical studies (medicine, surgery, theriogenology and/or field service) 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.	Davis
CS 814 /C	3/G	All	4th yr & CS 724	Veterinary Diagnostic Imaging II Armbrust, Biller Not offered Spring 2009 or Fall 2010	(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 imaging. Pr.: CS 724.	Biller
CS 818 /C	3/G	All 3 week rotations	4 th yr	Supplemental Clinical Small Animal Orthopedic Surgery N. Klocke, Renberg, Roush	(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	Roush

					Veterinary Medicine.	
CS 822 /C	2-4/G	2 credits offered all rotations except 1B/1C, 4A/4B, 5A/5B which are 4 credit rotations	4th yr	Exotic Animal, Wildlife, and Zoo Animal Medicine Carpenter, West	(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 (Not offered 2007-2008)	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 824	1/CR	Spring (Not offered 2008 2009 or 2010)	3 rd yr	Life-Long Learning Skills for Professional Students	(1) II. Develop basis skills in veterinary students and other professional students to help them assess recent scientific literature and continuing education information and help them choose which information to incorporate into their professional skills and knowledge base. Pr.: Third-year standing in the veterinary curriculum.	Roush
CS 825	1-4/CR	All	1st, 2nd, 3rd or Grad	International Veterinary Study Tours Various Faculty	(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 -3rd year or grad student in the College of Vet Med. Additional students admitted with discretion of faculty leading the tour.	Renberg
CS 827 New- Pending	2/G	All	1st, 2nd, 3rd yr or Grad Student	Health and Management of Llamas and Alpacas – Online Course Anderson	(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.	Anderson

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

# / 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.	Rush
CS 851 /D	1-5/G	All	DVM or consent	Breeding Diseases (Not Spring 2008)	(1-5) I, II, S. Advanced studies of the breeding diseases of domestic animals. Pr.: DVM degree or consent of staff.	Rush
CS 852 /D	3/G	Fall- Odd	DVM or consent	Interpretation of Radiology Studies of Body Systems Armbrust, 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.	Armbrust
CS 854 /D	1-3/G	All	DVM or consent	Systemic Medicine I (Not Spring 2008)	(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 858 /O	4/G	Spring, every 3 rd yr – offered next in Spring 2010	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	DVM or consent	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 total maximum of two credits. Pr.: Consent of department head. (I, II, S)	Lillich

CS 861, CS 862, &CS 863 /D	2/G	Fall 01,02, 03	Grad Student	Advanced Large Animal Surgery 1, 2, & 3 (was 864 & 865) Lillich 861 in F-07 862 in F-08 – offered Spring 2009 863 in F-09 861 in F-10 862 in F-11 863 in F-12	(2) I. Advanced Large Animal Surgery 1: In depth review and discussion of current basic surgical science and foundations of sound surgical practices. (2) I. Advanced Large Animal Surgery 2: Concentrated examination of the pre-operative, surgical and post-operative requirements of soft tissue surgical diseases/disorders of large animals. (2) I. Advanced Large Animal Surgery 3: Concentrated examination of the pre-operative, surgical and post-operative requirements of orthopedic or hard tissue surgical diseases/disorders of large animals. Pr.: DVM (or the equivalent) or Masters of Science in biological or medical sciences. Courses will be offered in sequential order, one each fall semester. Therefore, each individual course will be offered every 3 rd year.	Lillich
CS 867 /O	1/CR	Fall (Not offered 2004- 2010)	Grad Student	Advanced Diagnostic Imaging - Small Animal Billier	(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.	Billier
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 (not offered Fall 03 - 06)	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 (offered Spring 2005)	(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 874 /D	2/G	Fall	Grad Student	Clinical Pharmacokinetics Gehring	(2) I. An overview of pharmacokinetics with emphasis on practical implications for the clinician, including bioavailability, bioequivalence, residues in food of animal origin, dosage forms and regimens, therapeutic drug monitoring, drug interactions, interspecies differences, and the effect of disease on the pharmacokinetics of drugs. Two hours lecture a week.	Gehring
CS 875 /D	3/G	Spring	Grad Student	Advanced Pharmacokinetics Gehring	(3) II. Advanced study of the concepts and practical applications of pharmacokinetics for graduate students of veterinary clinical pharmacology, including the design and conduct of pharmacokinetic studies and the analysis and modeling of pharmacokinetic data. Two hours lecture and two hours practical per week. Pr.: CS 874	Gehring
CS 879 /D	1/G	Fall and 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 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.	Rush
CS 895 /O	1/G	Fall - Odd yrs	Grad Student	Research Methods Mason, Roush, Rush, 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, Lillich	(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.	Rush
New or pending courses offered under 800 # (not approved by all committees yet)						
CS 800 /	3/G	Var	4th yr	Advanced Anesthesiology Hodgson, Mason, McMurphy, D. Rankin (Not offered after Spring 2010)	Continuation of Clinical Anesthesia with assignment of more complex cases and required techniques.	McMurphy
CS 786 New-	1/G	Fall	2nd or 3rd yr	The Learning Curve of Equine Practice L. Beard, Davis (Offered Fall 2010)	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,	L. Beard/Davis

Pending					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.	
CS 787 New-Pending	1/G	Fall	3rd yr	Pain Management McMurphy (Offered Fall 2010)	(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 826 New-Pending	2/G	Fall	1st, 2nd, 3rd yr or Grad Student	Contemporary Issues in Veterinary Medicine Thomson (Offered Fall 2010)	Investigation of animal welfare, food safety and other societal concerns for animals and the veterinary profession. This course will help students learn to utilize scientific literature along with current events media to critically evaluate these contemporary issues. This class will expose students to many issues that pet owners, food producers and veterinarians face every day. Guest lecturers or moderators will be included for proper background debated topics with a focus on effective communication of evidence based decisions through writing and public speaking. Pr.: First, Second or Third-year standing in the College of Veterinary Medicine or Graduate School.	Thomson
New or pending graduate student courses offered under #890 (not approved by all committees yet)						
CS	2/G	Spring	Grad Student	Adv. Small Animal Endocrinology T. Schermerhorn 1 st offered 2008 Not offered in 2009	Advanced topics in small animal endocrinology with emphasis on comparative aspects of this disease and its clinical manifestations in dogs and cats. Primary literature, review articles, and advanced texts will be used as the principle sources of information. Pr.: DVM degree.	Schermerhorn
CS	2/G	Fall (2010)	Grad Student	Comparative Antimicrobial Clinical Pharmacology Apley (Not offered 2008)	Antimicrobial classes in veterinary medicine studied according to class characteristics and application in multiple veterinary species. Also FDA/CVM approval requirements, generic antimicrobials, susceptibility testing, pharmacodynamic modeling, antimicrobial resistance. Lectures, paper reviews, discussion, study assignments.	Apley
CS	1/G	Fall	Grad Student	Clinical Applications of Respiratory Physiology McMurphy (1st offered Fall 2008)		McMurphy
CS 880 New-Pending	3/G	Spring	Grad Student	Design and Interpretation of Production Livestock Field Trials Apley, Larson, Thomson (Offered Spring 2010)	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 /	1/G	Spring	Grad Student	Oncology Literature Review Higginbotham, McCaw 1 st offered 2008 Not offered 2009	This course will focus on critically reviewing the oncology literature. It will be a combination of review of the most current text in veterinary oncology (Withrow and Vail) as well as reviewing journal articles that either correlate with the text or recently published articles that are pertinent to the everyday practice of veterinary oncology. Students will be expected to participate in the presentation of the text as well as journal articles. Grading will be based upon attendance and class participation.	Higginbotham
CS /	1/G	Offer every 3 years	Grad Student	Respiratory Physiology (Offered Fall 2005 under CS 890)		W. Beard
CS /	1/G	Spring 2005 & 2008	Grad Student	Topics in Reconstructive Surgery Renberg, Swaim, W. Beard (every 3 years)-offered in 2005	This course will provide an overview of advanced surgical techniques in wound management and reconstructive surgery. It will enable the student to better appreciate the pathophysiology of wounds and tissue healing as well as provide detailed and current information on the clinical management of these cases. Pr.: DVM degree and advanced surgical training	Renberg
CS 881 New-Pending	3/G	Spring	Ophtho or Sx Resident at KSU VMTH	Veterinary Ophthalmic Surgery Techniques (Offered Spring 2010)	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 or surgery resident at Kansas State University Veterinary Medical Teaching Hospital.	A. Rankin
CS 878	1/G	Offer every 3 years	Grad Student	Wound Healing (Offered Spring 2005 under CS 890)		W. Beard
Courses from other departments which our faculty team teach						
DMP 759 /D	2/G	Spring	2 nd yr	Laboratory Animal Science Olson	Covers the history of animal use in research; laws, regulations, and policies governing the use of animals; animal welfare; biology, husbandry, and diseases of laboratory animals.	Olson
AP 770 /D	5/G	Fall	2 nd yr	Pharmacology CS Faculty participation by invitation of course director. Apley, Coetzee, Davis, Gehring, Harkin, Mason, McMurphy, Renberg, Schermerhorn	(5) I. The basic principles of pharmacology, the interaction of drugs and living systems which includes: the action of the drug upon the animal's systems, and the actions of the animal's body upon the drug. The application of these principles to the safe and efficacious use of drug regimens in veterinary medical and surgical patients. Four hours lec. and three hours lab a week. Pr.: AP 737 and 747 or equiv.	

DVM 701/D	1/C	Spring	1 st yr	Ethics and Jurisprudence	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.: First year standing in College of Veterinary Medicine. DVM-701	Elmore
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Course Type

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

I: Fall, II: Spring, S: Summer

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 Services)