Graduate Courses Taken by CS Master of Veterinary Biomedical Sciences Students (2010-2018)

Class	Description	Credits	Coordinator	
AP825	Special Anatomy	1 to 3	Szladovits	The gross and/or microscopic study of any system (or systems) of any domestic animal. Requisites: Prerequisite: AP 700 or AP 710 or equivalent and consent of staff. Typically Offered Fall, Spring, Summer
AP896	Intro to Responsible Conduct (	2	Schultz	This course will focus on providing graduate/professional students an introduction to the regulations, practices, ethical considerations, and professional interactions that define responsible conduct of biomedical research. Investigator responsibilities associated with initiating and establishing a research program, conducting experimental studies, analyzing and reporting data, publishing in peer-reviewed journals, considerations for submitting grant applications, and understanding compliance issues and regulations will be emphasized.
AP995	Problems in Physiology	2	Coetzee	Special problem-involving techniques utilized in studying the function of various organ systems of the body. Requisites: Prerequisite: Consent of instructor. Typically Offered Fall, Spring, Summer

ASI658	**Animal Growth and Developm**	**3**	**Gonzalez**	The molecular and endocrine mechanisms of prenatal and postnatal growth and development of muscle, bone, and adipose tissue will be discussed. Historical and current scientific literature will be reviewed and utilized to reinforce the topics covered. Note: Three hours of lecture a week.
ASI660	**Study Abroad Animal Science**	**3**	**Gonzalez**	Seminar and travel course designed to prepare students before the experience and for students to analyze, critique, and report their experience of an international experience associated with study tours or short courses. Course will focus on appropriate oral and written documentation of the student learning objectives for course experience. The academic topics will vary with each international activity. Requisites:
ASI681	**Dairy Cattle Nutrition**	**1**	**Bradford**	Nutritional management of dairy calves, replacement heifers, dry and lactating dairy cows. Diet formulation, feeding systems and current concepts in dairy cattle nutrition. Note: Three hours lecture a week for five weeks. Requisites:

				Graduate veterinary students will meet one hour weekly to review clinical equine images and review pertinent literature. Requisites: Prerequisite: Graduate student in the College of Veterinary Medicine.
CS857	**Clinical Interpretation of Equi**	**1**	**Santschi**	Typically Offered
				Credits: 1 A seminar for all house officers and all Clinical Sciences graduate students. Note: One hour seminar presentation each week. May re-enroll for total maximum of two credits.
CS859	**Clinical Sciences Seminar**	**1 or 2**	**Renberg**	Typically Offered
				Credits: 1 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
CS867	**Advanced Diagnostic Imaging**	**1**	**Biller**	

				Credits: 3 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. Requisites: Prerequisite: 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.
CS870	**Diagnostic Methods in Feedlo**	**1**	**Thomson**	Typically Offered
				Credits: 2 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. Requisites: Prerequisite: DVM degree
CS878	**Wound Healing**	**2**	**W. Beard**	Typically Offered

				Credits: 1 Advanced training in agricultural production medicine. 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. Requisites: Prerequisite: Graduate student.
CS879	**Applied Production Medicine**	**1**	**White**	
				Credits: 3 Designing appropriate studies to answer research questions that can be addressed in livestock production settings and to interpret and present the results in a suitable manner. Typically Offered
CS880	**Design and Interpretation of P**	**3**	**Larson**	
				Credits: 3 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. Requisites: Prerequisite: Ophthalmology resident at Kansas State University Veterinary Health Center.
CS881	**Veterinary Ophthalmic Surger**	**3**	**A. Rankin**	

CS884	**Surg Path 1**	**Hematology/Ane**	**1**	**Roush**	Credits: 1 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. Requisites: Prerequisite: Small animal surgery resident at Kansas State University Veterinary Health Center and Graduate Student.

					Credits: 1 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. Requisites: Prerequisite: Small animal surgery resident at Kansas State University Veterinary Health Center and Graduate Student. Typically Offered Fall, Spring, Summer
CS885	**Surg Path II**	**Analgesia/Wounc**	**1**	**Roush**	

CS886	**Surg Path III Soft Tissue Surge**	**1**	**Roush**	Credits: 1 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. Requisites: Prerequisite: Small animal surgery resident at Kansas State University Veterinary Health Center and Graduate Student. Typically Offered Fall, Spring, Summer

CS887	**Surg Path IV Ortho/Neuro**	**1**	**Roush**	Credits: 1 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. Requisites: Prerequisite: Small animal surgery resident at Kansas State University Veterinary Health Center and Graduate Student. Typically Offered Fall, Spring, Summer
CS890	**Problems in Clinical Sciences**	**1 or 2**	**CS Dept Head**	Credits: 1-3 Advanced instruction in research topics and technologies, emphasizing various clinical disciplines. Requisites: Prerequisite: D.V.M. Degree. or dual degree students in the College of Veterinary Medicine Typically Offered Fall, Spring, Summer

CS895	**Research Methods**	**1**	**Davis**	Credits: 1 Discussion of research design, grantsmanship, practical statistics, manuscript preparation, and ethics. Requisites: Prerequisite: DVM degree or consent of department head. Typically Offered Fall, odd years
CS899	**Thesis/Research**	**6 to 12**	**CS Dept Head**	Credits: 1-6 Individual research in any of the fields of Clinical Sciences. Note: This work may form the basis for either the M.S. Thesis or the M.S. Report. Requisites: Prerequisite: Graduate standing.
DMP611	**Cow-Calf Health Systems**	**2**	**Hanzlicek**	Credits: 2 Management of animal well-being and efficient production in a cow-calf system. Includes the areas of health, growth, nutrition, pharmaceutical management, and reproduction. Typically Offered

DMP812	**Veterinary Bacteriology and M**	**4**	**Chengappa**	Credits: 4 Morphology, biology and classification of pathogenic bacteria and fungi and their relation to the causes of disease. Note: Three hours of lecture and one hour lab each week. Requisites: Prerequisite: BIOL 455 Typically Offered Fall
DMP820	**Rumen Metabolism**	**3**	**Nagaraja**	Credits: 3 Metabolism, absorption, digestion, and passage of nutrients in the rumen; factors affecting the environment of the rumen; certain aspects of rumen function and dysfunction; techniques used in rumen research. Note: Three one-hour lectures a week. Requisites: Prerequisite: ASI 318 and BIOCH 521 or BIOCH 755. Typically Offered Spring, even years

				Credits: 3 Practical experience manipulating numerical data bases and turning that information into usable knowledge to aid veterinary diagnostic strategies, implementing health management programs, and food animal production decision making processes. Requisites: Prerequisite: Successful completion of the first year in the veterinary curriculum.
DMP830	**Quanitiative Analysis in Food I**	**3**	**Dritz**	Typically Offered
DMP850	**Immunology of Domestic Spec**	**3**	**Chang/Rowland**	Credits: 3 This course is designed to introduce graduate students to immune responses of domestic animals to pathogens and parasites. Requisites: Prerequisite: BIOL 541.

				Credits: 3 Epidemiologic principles of disease with a focus on measures of disease occurrence, association and impact, determinants of disease diagnostic test evaluation, study design and critical literature evaluation. Requisites: Prerequisite: DMP 708 or DMP 754 or equivalent AND STAT 701 or STAT 703 or DMP 830 or equivalent. Typically Offered Spring Crosslisted: MPH 854
DMP854	**Intermediate Epidemiology**	**3**	**Sanderson**	

				Credits: 1 Oral presentations on topics in epidemiology, food safety, immunology, microbiology, molecular biology, parasitology, pathology, and toxicology. Reports will include critical review of the relevant literature; experimental design and methodology; and presentation and critical evaluation of data. The course is for MS students. Typically Offered Fall, Spring, Summer
DMP870	**DMP seminar**	**1**	**Chang/Rowland**	

				Credits: 3 This graduate course is aimed at reviewing, and evaluating new and improved molecular diagnostic methods for infectious diseases. Theory, development, and applications of molecular diagnostic tests will be discussed in the context of current literature. This course will provide an opportunity for students to learn and apply recent advances in the development of molecular diagnostic test. Requisites: Prerequisite: BIOCH 521 or BIOL 625. Students without the prerequisites must have the permission of the course coordinator. Typically Offered Fall, odd years
DMP871	**Molecular Diagnostics of Infec**	**3**	**Ganta**	Credits: 1-3 Theory and practical experience in the use of flow cytometry in diagnosis and research. Requisites: Prerequisite: Graduate standing.
DMP878	**Applications in Flow Cytometr**	**2**	**Knights**	

DMP880	**Problems in Pathobiology**	**3**	**Nagaraja**	Credits: 1-6 A special problems course for graduate students working toward the MS degree in Pathobiology. The course is generally problems- or techniques-based in any of the disciplines in the Pathobiology program, conducted under the supervision of a graduate faculty in the Pathobiology Graduate Program. Typically Offered Fall, Spring, Summer
DMP970	**Seminar in Pathobiology**	**1**	**Reif, Rowland**	Credits: 1 Oral presentations on topics in epidemiology, food safety, immunology, microbiology, molecular biology, parasitology, pathology, and toxicology. Reports will include critical review of the relevant literature; experimental design and methodology; and presentation and critical evaluation of data. The course is for PhD students. Typically Offered Fall, Spring, Summer

				Credits: 2 Lecture and laboratory on the modern techniques to study genes and genomes. Repeat for Credit Repeatable Requisites: Recommended Prerequisite: One of the following courses: PLPTH 610, AGRON 610, BIOCH 521, BIOCH 522, BIOL 675, BIOL 676, PLPTH 680, AGRON 680 Typically Offered Summer
PLPTH885	**Genomics Technologies Works**	**2**	**Akhunova**	

				Credits: 3 A course emphasizing concepts and practice of statistical data analysis for the health sciences. Basic techniques of descriptive and inferential statistical methods applied to health related surveys and designed experiments. Populations and samples, parameters and statistics; sampling distributions for hypothesis testing and confidence intervals for means and proportions involving one sample, paired samples and multiple independent samples; odds ratios, risk ratios, simple linear regression. Use of statistical software to facilitate the collection, manipulation, analysis and interpretation of health related data. Requisites: Prerequisite: Junior standing and equivalent of college algebra or with instructor permission. Typically Offered Fall, Spring, Summer Crosslisted:
STAT701	**Fundamental Methods of Bios**	**3**	**Hsu**	MPH 701

				Credits: 3 Statistical concepts and methods applied to experimental and survey research in the sciences; tests of hypotheses, parametric and rank tests; point estimation and confidence intervals; linear regression; correlation; one-way analysis of variance; contingency tables, chi-square tests. Requisites: Prerequisite: Junior standing and equivalent of college algebra or with instructor permission. Typically Offered Fall, Spring, Summer
STAT703	**(Intro) Statistical Methods for**	**3**	**Song**	
				Credits: 3 Simple and multiple linear regression, analysis of covariance, correlation analysis, one-, two- and three-way analysis of variance; multiple comparisons; applications including use of computers; blocking and random effects. Requisites: Prerequisite: One previous statistics course.
STAT705	**Regression and Analysis of Va**	**3**	**Jager**	Typically Offered