535 Cell Biology and Physiology II  
Spring. 4 credits. Interdepartmental with Physiology; Biochemistry and Molecular Biology. Administered by Department of Physiology. R: Open only to graduate-professional students in the College of Human Medicine or the College of Osteopathic Medicine. Modern concepts of cell biology as a basis for understanding the physiology of human tissues and organ systems in health and disease. Continuation of PSL 534.

551 Medical Gross Anatomy  
Fall. 6(4-6) R: Open only to graduate-professional students in the College of Human Medicine or College of Osteopathic Medicine or approval of department. SA: ANT 551  
Human regional gross anatomy with clinical correlations using dissections, cross-sections, medical imaging, multimedia and hypermedia.

552 Medical Neuroscience  
Spring. 4(3-2) Interdepartmental with Neurology and Ophthalmology; Physiology; Radiology. Administered by Department of Neurology and Ophthalmology. R: Graduate-professional students in the Colleges of Human Medicine and Osteopathic Medicine. SA: ANT 552  
Correlation of normal structure and function of the human nervous system with clinical testing, classical lesions, and common diseases.

562 Medical Histology  
Spring. 3(2-2) R: Graduate-professional students in colleges of Human Medicine and Osteopathic Medicine. SA: ANT 562  
Histology of the human body.

585 Directed Study in Human Prosection  
Fall, Spring, Summer. 1 to 5 credits. A student may earn a maximum of 15 credits in all enrollments for this course. P:M: (ANTR 551) R: Open only to graduate-professional students in the College of Human Medicine or College of Osteopathic Medicine and approval of department. Prosection of selected regions and isolated structures of preserved human cadavers. Oral presentation.

820 Advanced Neuroanatomy  
Summer of odd years, 1 to 5 credits. A student may earn a maximum of 12 credits in all enrollments for this course. Interdepartmental with Neuroscience. Administered by Program in Neuroscience. R: Approval of department. Current topics in anatomy and physiology processes of central nervous system cells.

839 Systems Neuroscience  
Spring. 4(4-0) Interdepartmental with Neuroscience; Pharmacology and Toxicology; Physiology; Psychology; Zoology. Administered by Program in Neuroscience. R: Open only to graduate students in the Colleges of Human Medicine, Osteopathic Medicine, Agriculture and Natural Resources, Natural Science, Social Science, and Veterinary Medicine. SA: ANT 839  
Anatomy, pharmacology, and physiology of multicellular neural systems. Sensory, motor, autonomic, and chemo-regulatory systems in vertebrate brains.

885 Vertebrate Neural Systems  
Spring of odd years, 3(2-2) Interdepartmental with Neuroscience; Physiology. Administered by Program in Neuroscience. SA: ANT 885  
Comparative analysis of major component systems of vertebrate brains. Evolution, ontogeny, structure, and function in fish, amphibians, reptiles, birds and mammals.

VETERINARY ANATOMY ANTV

Department of Pathobiology and Diagnostic Investigation College of Veterinary Medicine

515 Comparative Veterinary Gross Anatomy  
Fall. 6(2-10) R: Open only to graduate-professional students in the College of Veterinary Medicine. SA: ANT 515  
Canine anatomy. Comparisons with ruminant, porcine, and equine anatomy.

516 Veterinary Histology and Cell Biology  
Fall. 4(3-2) R: Open only to graduate-professional students in the College of Veterinary Medicine. SA: ANT 516  
Principles of developmental, cellular, and molecular biology as related to veterinary medicine.

517 Veterinary Neuroanatomy  
Spring. 1(1-0) R: Completion of Semester 1 of the graduate-professional program in the College of Veterinary Medicine. SA: ANT 517  
Introduction to the anatomy of the nervous system using the canine species as a model.

610 Veterinary Gross Anatomy Dissection  
Spring. 1 to 3 credits. A student may earn a maximum of credits in all enrollments for this course. RB: (ANTV 515) R: Open only to graduate-professional students in College of Veterinary Medicine. SA: ANT 610  
Dissection and prosection of selected regions of domestic animals.

611 Research Problems in Veterinary Anatomy  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate-professional students in the College of Veterinary Medicine. Approval of department. SA: ANT 611  
Veterinary gross anatomy, cell biology, histology, or neurobiology.

ANIMAL SCIENCE ANS

Department of Animal Science College of Agriculture and Natural Resources

110 Introductory Animal Agriculture  
Fall, Spring. 4(3-2) SA: ANS 112  
History of animal agriculture and its relationship to human needs, production systems, marketing, and environmental considerations. Current goals of and limitations affecting U.S. farm animal production.

140 Fundamentals of Horsemanship  
Spring. 2(0-4) A student may earn a maximum of 4 credits in all enrollments for this course. Safe horse handling skills. Riding skills. Riding aids and working with the horse at the beginner, intermediate or advanced level.

141 Draft Horse Basics  
Fall, Spring. 2(0-4) Safe handling, hitching and driving of draft horses. Care and maintenance of harness and horse drawn equipment.

142 Horse Training for Competition  
Spring. 2(0-4) RB: (ANS 140) R: Approval of department. Training techniques to prepare horses for competition. Exhibiting horses. Field trips required.

200A Introductory Judging of Livestock or Carcasses  
Spring. 1 to 2 credits. A student may earn a maximum of 3 credits in all enrollments for this course. RB: (ANS 211) R: A student may earn a maximum of 8 credits from ANS 200A, ANS 200B, ANS 200C, ANS 200D, ANS 300A, ANS 300B, ANS 300C and ANS 300D. Evaluation of functional conformation of beef cattle, sheep and swine and their carcasses. Preparation for intercollegiate competition. Field trips required.

200C Introductory Judging of Dairy Cattle  
Spring. 1 to 2 credits. A student may earn a maximum of 3 credits in all enrollments for this course. R: A student may earn a maximum of 8 credits from the following courses: ANS 200A, ANS 200B, ANS 200C, ANS 200D, ANS 300A, ANS 300B, ANS 300C and ANS 300D. SA: ANS 200B  

200D Introductory Judging of Horses  
Spring. 1 to 2 credits. A student may earn a maximum of 3 credits in all enrollments for this course. R: A student may earn a maximum of 8 credits from ANS 200A, ANS 200B, ANS 200C, ANS 200D, ANS 300A, ANS 300B, ANS 300C and ANS 300D. SA: ANS 200B  

210 Animal Products  
Fall. 4(3-3) R: Not open to freshmen. Edible animal products. Processing, preservation, storage and distribution of dairy, meat, and egg products.