Cell Biology and Physiology II 535 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 un-derstanding 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 prosections, cross-sections, medical imaging, multimedia and hypermedia.

552 **Medical Neuroscience**

Spring. 4(3-2) Interdepartmental with Neurology and Ophthalmology; Physiology; Ra-diology. 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

Advanced Neuroanatomy 820

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.

Systems Neuroscience 839

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

Department of Pathobiology and **Diagnostic Investigation College of Veterinary Medicine**

Comparative Veterinary Gross Anatomy 515 Fall. 6(2-10) R: Open only to graduate-professional students in the College of Veterinary Medicine, SA: ANT 515

ANTV

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.

Veterinary Gross Anatomy Dissection 610

Spring. 1 to 3 credits. A student may earn a maximum of 6 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

Research Problems in Veterinary 611 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**

Introductory Animal Agriculture 110 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.

Draft Horse Basics 141

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

Horse Training for Competition 142

Summer. 2(0-4) RB: (ANS 140) R: Approval of department.

Training techniques to prepare horses for competi-tion. Exhibiting horses. Field trips required.

Introductory Judging of Livestock or 200A 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

Evaluation of functional conformation of dairy cattle. Preparation for intercollegiate competition. Field trips required.

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

Evaluation of functional conformation and performance of horses. Preparation for intercollegiate competition. Field trips required.

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.