VETERINARY MEDICINE CLINICAL SCIENCES (VETCS)

VETCS 6180 - Principles of Magnetic Resonance Imaging (3 Credits)
Crosslisted with BME 6180, ECE 6695
After a brief overview of all major medical modalities: x-ray, CT, MRI, SPECT/PET, and US, this course will focus on the formulations of spatial encoding and image contrasts as exemplified in MRI. The inverse problem between detected signal and image source will be discussed for biomedical applications. The concepts of image resolution, image contrast, SNR, and scan time will be illustrated quantitatively from an engineering point of view.
Prerequisites: functional knowledge and skills of linear algebra, calculus based physics, and knowledge of Fourier transformation.
Last Four Terms Offered: Fall 2023, Fall 2021, Fall 2020, Fall 2019
Schedule of Classes (https://classes.cornell.edu/)

VETCS 7100 - Advanced Veterinary Anesthesiology I (1 Credit)
This course is designed to prepare house officers in the Section of Anesthesiology and Pain Medicine for the American College of Veterinary Anesthesia and Analgesia (ACVAA) certifying examination. It also provides continuing education for faculty and staff. The course is suitable for interns and residents training in other specialties, such as surgery, internal medicine, emergency medicine, critical care, and laboratory animal medicine, as well as graduate students with interests in applied physiology and pharmacology. It consists of a three-year cycle of topics (two semesters of anatomy and physiology - focusing on the respiratory, cardiovascular, and neurological systems - and one semester each of pharmacology, equipment, monitoring, and clinical anesthesiology). Each week, a lecture (usually presented by a resident or faculty member in the Section of Anesthesiology and Pain Medicine, or sometimes by faculty from other sections and departments), resident-led book chapter review, or laboratory is held. An online, multiple-choice, mock ACVAA examination concludes each semester.
Prerequisites: VTMED 5606 or permission of instructor.
Enrollment Information: Enrollment limited to: third- and fourth-year veterinary students, graduate students, interns, and residents.
Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
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