COMMON COURSE OUTLINE: Course discipline/number/title: VT 2620: Applied Diagnostic Imaging

A. CATALOG DESCRIPTION
1. Credits: 1
2. Hours/Week: 2 laboratory hours
3. Prerequisites (Course discipline/number): Grade of C or better in: VT 2230, VT 1610, VT 2920, VT 2260 and VT 2250. May be taken concurrently with VT 2260 or VT 2250.
4. Co-requisites (Course discipline/number): None
5. MnTC Goals (if any): NA

This course is a continuation of VT 1610: Fundamentals of Diagnostic Imaging. Focus of the course will be on the practical application of proper positioning to obtain diagnostic quality radiographs. In addition to routine radiography, topics include: trouble shooting radiographic quality, use of contrast media, sonography, dental radiography, special imaging techniques and development of a radiographic technique charts.

B. DATE LAST REVISED (Month, year): February, 2011

C. OUTLINE OF MAJOR CONTENT AREAS:
1. Positioning of patients
   a) Thoracic limb
   b) Pelvic limb
   c) Soft tissues
   d) Skull
   e) Spine
   f) Large animal
   g) Avian and Exotics
   h) Dental radiography
2. Special Diagnostic Imaging
   a) Ultrasound
   b) OFA applications/postioning
   c) Contrast studies
   d) MRI
   e) CT
   f) Nuclear Medicine
3. Radiographic Quality
   a) Density
   b) Contrast
   c) Detail
   d) Distortion
   e) Exposure variables
   f) Techniques charts

D. LEARNING OUTCOMES (GENERAL): The student will be able to:
1. Understand each of the radiological modalities such as CT, Nuclear Medicine, Magnetic Resonance Imaging, Sonography, and Radiation Therapy.
2. Complete full mouth quality diagnostic oral radiology of the Canine and Feline
3. Understand routine contrast media studies including barium studies, cystography, and excretory and urography.
4. Demonstrate radiation safety while taking quality diagnostic radiographs using general principles of animal positioning.

E. LEARNING OUTCOMES (MNTC): NA

F. METHODS FOR EVALUATION OF STUDENT LEARNING:
1. Laboratory reports and/or quizzes
2. Objective and/or subjective tests
3. Laboratory practical tests
F. METHODS FOR EVALUATION OF STUDENT LEARNING: Continued...
4. Course assignments
5. Group work/projects
6. Attendance (especially laboratory attendance)

G. RCTC CORE OUTCOME(S) ADDRESSED:
- Communication
- Critical Thinking
- Global Awareness/Diversity
- Civic Responsibility
- Personal/Professional Accountability
- Aesthetic Response

H. SPECIAL INFORMATION (if any):
The initial lab session explains and familiarizes the student with general safety hazards and safety equipment to the lab. During the pre-lab discussion, the hazardous characteristics of any materials used during a lab are discussed. In addition, if the lab involves any potentially infectious or zoonotic material, the students will be instructed on the proper use and disposal. The instructor will direct all students to where necessary protective equipment while working with any hazardous chemicals. A copy of Material Safety Data Sheets for chemicals used is available in the lab.