EATM M119L: VETERINARY RADIOGRAPHY LABORATORY

Originator
lshapiro

College
Moorpark College

Attach Support Documentation (as needed)
RVTProgramJustification.pdf
RVTProgramCourseRequirements.docx

Discipline (CB01A)
EATM - Exotic Animal Training Mgmt

Course Number (CB01B)
M119L

Course Title (CB02)
Veterinary Radiography Laboratory

Banner/Short Title
Vet Radiology Lab

Credit Type
Credit

Honors
No

Start Term
Fall 2020

Catalog Course Description
Provides students with a hands-on learning experience in safely taking quality diagnostic x-rays of animals. Emphasizes the proper positioning techniques of animals for various radiographic images, animal comfort, radiation safety, and equipment manipulation.

Taxonomy of Programs (TOP) Code (CB03)
0102.10 - *Veterinary Technician (Licensed)

Course Credit Status (CB04)
D (Credit - Degree Applicable)

Course Transfer Status (CB05) (select one only)
B (Transferable to CSU only)

Course Basic Skills Status (CB08)
N - The Course is Not a Basic Skills Course

SAM Priority Code (CB09)
C - Clearly Occupational

Course Cooperative Work Experience Education Status (CB10)
N - Is Not Part of a Cooperative Work Experience Education Program

Course Classification Status (CB11)
Y - Credit Course

Educational Assistance Class Instruction (Approved Special Class) (CB13)
N - The Course is Not an Approved Special Class

Course Prior to Transfer Level (CB21)
Y - Not Applicable

Course Noncredit Category (CB22)
Y - Credit Course

Funding Agency Category (CB23)
B - Partially Developed Using Economic Development Funds

Course Program Status (CB24)
1 - Program Applicable

General Education Status (CB25)
Y - Not Applicable

Support Course Status (CB26)
N - Course is not a support course

Field trips
May be required

Faculty notes on field trips; include possible destinations or other pertinent information
Students may be required to obtain needed hands-on experiences at local veterinary clinics and or hospitals.

Grading method
Letter Graded

Alternate grading methods
Credit by exam, license, etc.

Does this course require an instructional materials fee?
No

Repeatable for Credit
No

Is this course part of a family?
No

Units and Hours

Carnegie Unit Override
No

In-Class

Lecture

Activity

Laboratory
Minimum Contact/In-Class Laboratory Hours
52.5
Maximum Contact/In-Class Laboratory Hours
52.5

Total in-Class

Total in-Class
Total Minimum Contact/In-Class Hours
52.5
Total Maximum Contact/In-Class Hours
52.5

Outside-of-Class

Internship/Cooperative Work Experience

Paid

Unpaid

Total Outside-of-Class

Total Outside-of-Class

Total Student Learning

Total Student Learning
Total Minimum Student Learning Hours
52.5
Total Maximum Student Learning Hours
52.5

Minimum Units (CB07)
1
Maximum Units (CB06)
1

Prerequisites
EATM M120 and EATM M120L

Corequisites
EATM M119

Limitations on Enrollment

Criminal background clearance
Current CPR certification for health care provider (American Heart Association) or professional rescuer (American Red Cross)
Drug and alcohol clearance
Fingerprint clearance
Current negative TB test or chest x-ray
Others (specify)

Other Limitations on Enrollment

1. Admission to the Moorpark College Registered Veterinary Technology Program
2. Current tetanus vaccination

Entrance Skills

Entrance Skills

EATM M120
1. identify and describe the basic anatomical structures of mammals.
2. identify and utilize basic nomenclature related to anatomy and physiology.
3. explain the relationship between the various anatomical and physiological systems found in normal mammal, avian, and reptile species.
4. discuss in terms of structure and function, the unique anatomical and physiological adaptations of certain groups of mammal, avian, and reptile species.
5. distinguish between the major components of the nervous system and describe the structure and function of the neuron and process of nerve transmission.
6. distinguish between the major components of the reproductive system and describe the structure and function of the ovary.
7. compare the effects of hormones on follicle development.
8. describe the structure and function of the nephron and the effects of hormones on urine formation.
9. distinguish between the different organs that contribute to digestion.
10. compare and contrast the digestive process for major macro-molecules.

EATM M120L
1. distinguish the parts of the brain and major nerves and describe their functions.
2. utilize microscopes and photographs to identify and describe the location and function of epithelial, muscular, nervous, and connective tissues.

3. distinguish the three layers of the skin, the associated structures found within the skin layers, and the structures derived from the skin.
4. differentiate individual bones of the axial and appendicular skeleton using articulated and disarticulated skeletons from common domesticated species.
5. distinguish the surface features of bones of the axial and appendicular skeleton.
6. identify the major joints using articulated and disarticulated skeletons.
7. distinguish the major skeletal muscles and describe their actions.
8. differentiate and describe the functions of the major organs of the respiratory, cardiovascular, digestive, and genitourinary systems.
9. differentiate the major internal organs on radiographs.
10. identify the individual bones and major joins on radiographs.
11. identify on various radiographs anatomical differences between species, gender and age.
12. identify histological differences of the four basic animal tissues and relate normal from abnormal cells.

Requisite Justification

Requisite Type
Prerequisite

Requisite
EATM M120, EATM M120L

Requisite Description
Course in a sequence

Level of Scrutiny/Justification
Required by statute or regulation

Requisite Type
Corequisite

Requisite
EATM M119

Requisite Description
Course in a sequence

Level of Scrutiny/Justification
Closely related lecture/laboratory course

Requisite Type
Enrollment Limitation

Requisite
1. Criminal background clearance; 2. Current negative TB test or chest x-ray; 3. Drug and alcohol clearance; 4. Fingerprint clearance; 5. No visible tattoos or visible body piercings except single studs in earlobes. Other: 1. Admission to the Moorpark College Registered Veterinary Program; 2. Current tetanus vaccination

Requisite Description
Credit program requisite (credit only)

Level of Scrutiny/Justification
Required by statute or regulation

Student Learning Outcomes (CSLOs)

	Upon satisfactory completion of the course, students will be able to:
1	take a quality diagnostic image using film technology utilizing safe and effective techniques given an animal patient and body region.

2	produce a quality diagnostic image using digital x-ray technology utilizing safe and effective techniques given an animal patient and body region.

Course Objectives

	Upon satisfactory completion of the course, students will be able to:
1	implement safety measures when taking x-rays.
2	create and utilize a technique chart for taking radiographic images.
3	demonstrate proper technique for processing film x-rays.
4	demonstrate proper positioning of small animals to take x-ray images for all body regions.
5	utilize both film and digital technology to take x-rays.
6	develop trouble shooting skills for correcting and improving radiographs.

Course Content

Lecture/Course Content

n/a (this is a laboratory course)

Laboratory or Activity Content

(8.6%) Radiation Safety

(5.7%) Producing a Technique Chart

(2.9%) Processing Digital Systems

(10%) Barium Study

(11.4%) Exotic and Zoo Animals

(11.4%) Equine

Proper positioning and technique for taking x-rays of various animal body systems of:

(4.3%) Thorax

(4.3%) Abdomen

(4.3%) Spine

(11.4%) Pelvis/Hind Limb

(11.4%) Shoulder/Front Limb

(4.3%) Skull/Jaw

(10%) Dental

Methods of Evaluation

Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):

Problem solving exercises
Skills demonstrations
Written expression

Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):

Clinical demonstration
Computational homework
Group projects
Individual projects
Journals
Laboratory activities
Laboratory reports
Mathematical proofs
Oral analysis/critiques
Oral presentations
Reports/papers
Skills demonstrations
Skill tests
Simulations
Treatment plans

Instructional Methodology

Specify the methods of instruction that may be employed in this course

Collaborative group work
Clinical demonstrations
Demonstrations
Group discussions
Instructor-guided interpretation and analysis
Instructor-guided use of technology
Laboratory activities

Describe specific examples of the methods the instructor will use:

The professor will provide guidance for students preparing, positioning, and manipulating the equipment to take x-rays of animals in the veterinary care setting.

Observations and feedback provided to assist in mastery of the skills required to take safe and quality diagnostic x-ray images of animals at the clinical veterinary agency.

Representative Course Assignments

Writing Assignments

Write lab reports on diagnostic x-rays performed on animals on a weekly basis.

Write radiation safety reports on a weekly basis.

Critical Thinking Assignments

Create a technique chart by assessing radiographs and utilizing basic math skills for common domestic animals.

Evaluate the radiographs taken of zoo or exotic animals for quality and write a summary of findings with recommendations for improvement.

Reading Assignments

Read assigned chapters from textbooks related to veterinary radiography.

Read additional reading assignments posted on the online learning management system from government and veterinary regulatory associations pertaining to the use of x-rays and ultrasound.

Skills Demonstrations

Demonstrate proper positioning of animals to take diagnostic images of various body parts.

Manipulate exposure factors to produce quality radiographs.

Outside Assignments

Articulation

Comparable Courses within the VCCCD

AG V68 - Veterinary Diagnostic Imaging

Equivalent Courses at other CCCs

College	Course ID	Course Title	Units
L.A. Pierce College	ANML SC 436	Veterinary Radiology Lab	2

District General Education

A. Natural Sciences

B. Social and Behavioral Sciences

C. Humanities

D. Language and Rationality

E. Health and Physical Education/Kinesiology

F. Ethnic Studies/Gender Studies

Course is CSU transferable
Yes

CSU Baccalaureate List effective term:
FALL 2020

CSU GE-Breadth

Area A: English Language Communication and Critical Thinking

Area B: Scientific Inquiry and Quantitative Reasoning

Area C: Arts and Humanities

Area D: Social Sciences

Area E: Lifelong Learning and Self-Development

CSU Graduation Requirement in U.S. History, Constitution and American Ideals:

IGETC

Area 1: English Communication

Area 2A: Mathematical Concepts & Quantitative Reasoning

Area 3: Arts and Humanities

Area 4: Social and Behavioral Sciences

Area 5: Physical and Biological Sciences

Area 6: Languages Other than English (LOTE)

Textbooks and Lab Manuals
Description
Brown, Marg, and Lois Brown. *Lavin's Radiography in Veterinary Technology*. 6th ed., Elsevier, 2017.

Description
Krautwald - Junghanns, Maria-Elizabeth, et al. *Diagnostic Imaging of Exotic Pets: Birds - Small Mammals - Reptiles*. Schlutersche, 2010.

Library Resources

Assignments requiring library resources
Regulations, guidelines, and techniques for taking safe and quality comfort x-rays.

Sufficient Library Resources exist
Yes

Example of Assignments Requiring Library Resources
Utilize library print and online resources to research topics such as the exposure factors to manipulate in order to produce quality x-rays.

Primary Minimum Qualification
ANIMAL TRAINING & MANAGEMENT

Additional Minimum Qualifications

Minimum Qualifications
Biological Sciences

Additional local certifications required
RVT or DVM

Review and Approval Dates

Department Chair
12/06/2019

Dean
12/09/2019

Technical Review
01/31/2020

Curriculum Committee
02/04/2020

DTRW-I
02/13/2020

Curriculum Committee
MM/DD/YYYY

Board
03/10/2020

CCCCO
MM/DD/YYYY

DOE/accreditation approval date
MM/DD/YYYY