# VETERINARY **MEDICINE**

# VM

# **College of Veterinary Medicine**

## 101 **Veterinary Medicine in Society** Spring. 1(1-0)

Role of the veterinary profession in animal and human health. Impact of veterinary medicine on society.

## 110

**Veterinary Medical Terminology**Fall. 1(1-0) R: Open only to Veterinary Technology majors. Approval of college.

Veterinary medical terminology, focusing on fundamental recognition, interpretation and usage of

### **Applied Biochemistry and Nutrients for** 120 Veterinary Technicians

Fall. 2(2-0) P: BS 111 and BS 111L R: Open only to Veterinary Technology majors. Approval of college.

Basic fundamentals of cell structure and metabo-Energy metabolism, nutrients and nutrient requirements of common domestic species.

#### 130 **Comparative Anatomy for Veterinary** Technicians

Fall. 2(1-2) P: BS 111 and BS 111L R: Open only to Veterinary Technology majors. Approval of college.

Gross anatomy of the common animal species encountered in veterinary medicine. Overview of the functional anatomy of the musculoskeletal, digestive, cardiovascular, cutaneous, respiratory, urogenital, nervous, and endocrine systems and the special senses.

### 140 **Pharmacology for Veterinary** Technicians

Fall. 2(2-0) P: MTH 103 or MTH 110 or MTH 116 R: Open only to Veterinary Technology

majors. Approval of college.
Fundamentals of characteristics, classification and usage of veterinary pharmaceuticals. Introduction to and application of dosage and formulation calculations.

## 150 **Hospital Procedures and Communication**

Spring. 2(2-0) P: VM 110 and VM 140 R: Open only to Veterinary Technology majors. Development of various modalities of professional

# **Veterinary Technology Careers and Professional Development**

Fall. 1(1-0) R: Open only to Veterinary Technology majors. Approval of college.

Career options in veterinary technology, discussion of professional, ethical and legal considerations. Portfolio development, resume and cover-letter writing skills.

# 160

and client communication skills.

Small Animal Nursing Skills Spring. 3(2-3) P: VM 110 and VM 130 and VM 140 R: Open to students in the Veterinary Technology major. Approval of col-

Small animal nursing including principles of restraint, physical examination, medical management techniques, and behavior of common companion ani-Recognition of common canine and feline breeds.

### 165 Large Animal and Laboratory Animal **Nursing Care Techniques**

Fall. 2(1-2) P: VM 110 and VM 130 and VM 140 R: Open only to Veterinary Technology

Fundamentals of the handling of equine, food animal and laboratory animal species. Breed identification, specimen collection, physical exam, medication administration and other nursing care procedures relevant to the species.

## Hematology and Immunology for 170 Veterinary Technicians

Spring. 2(2-0) P: VM 110 and VM 120 R: Open only to Veterinary Technology majors. C: VM 175 concurrently.

Structure and function of normal blood cells, cellular and humoral immunity, mechanisms of hemostasis, blood group serology, transfusion medicine and

#### 175 Clinical Pathology Laboratory I for Veterinary Technicians

Spring. 1(0-2) P: VM 110 and VM 120 R: Open only to Veterinary Technology majors. C: VM 170 concurrently.

Veterinary clinical pathology laboratory including diagnostic procedures in hematology, serology and ELISA methodology.

## Clinical Pathology Laboratory II for 176

Veterinary Technicians Fall. 1(0-2) P: VM 175 and VM 170 R: Open only to Veterinary Technology majors.

Comprehensive veterinary clinical pathology laboratory, including diagnostic procedures in urology, dermatology, cytology, and advanced methods in hematology

## 205 **Preventive Animal Health Care for Veterinary Technicians**

Spring. 3(3-0) P: VM 130 and VM 140 and VM 250 R: Open to undergraduate students in the Veterinary Technology major. proval of college.

Development of husbandry techniques to enhance wellness and reduce the risk of disease, injury and stress in common domestic and exotic animals.

## **Surgical Nursing for Veterinary** 210 **Technicians**

Fall. 2(2-0) P: VM 160 R: Open only to Veterinary Technology majors. C: VM 215 concurrently or VM 303 concurrently.

Role of the veterinary technician as a member of the veterinary surgical team.

# **Surgical Nursing and Anesthetic Management Laboratory**

Fall. 1(0-4) R: Open only to Veterinary Technology majors. C: VM 210 concurrently or VM 303 concurrently.

Principles and techniques in veterinary surgical nursing and anesthesia.

# **Parasitology for Veterinary Technicians** Spring. 2(1-2) P: VM 140 and VM 175 RB:

VM 250 R: Open only to Veterinary Technology majors.

Parasites of veterinary and public health importance, including gross and microscopic morphology, transmission, and control.

### 250 **Veterinary Comparative Clinical** Physiology

Fall. 5(5-0) P: BS 111 or LB 145 R: Open to undergraduate students in the Veterinary Technology major. Approval of college. C: VM 110 concurrently and VM 120 concurrently and VM 130 concurrently.

Function, regulation, and integration of organs and organ systems of common domestic species. Concepts with clinical relevance.

# Small Animal Diseases and Management

Fall. 3(3-0) P: VM 160 and VM 170 and VM 250 R: Open only to Veterinary Technology maiors.

Pathophysiology, transmission, diagnostic process, clinical management and prevention of canine and feline diseases.

## **Dentistry Techniques for Veterinary** Technicians

Spring. 1(0-4) P: VM 215 R: Open only to Veterinary Technology majors.

Veterinary dental techniques and oral cavity assessment for companion animals.

# Advanced Skills Development for **Veterinary Technicians**

Spring. 1(0-3) P: VM 210 and VM 215 and VM 255 R: Open to students in the Veterinary Technology major. Approval of college.

Service-oriented approach to health care development in an operational animal care facility.

# Large Animal Diseases and Management Spring. 3(3-0) P: VM 165 and VM 170 and VM 250 R: Open only to Veterinary Tech-

nology majors. Diseases, husbandry, preventative health care and client education for equine and food animal species.

## 285 **Clinical Nutrition for Veterinary** Technologists

Fall. 1(1-0) P: VM 250 R: Open only to Veterinary Technology majors.

Nutritional assessment and management of common domestic species in veterinary medicine.

#### 290 Special Studies in Veterinary Medicine

Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to undergraduate students in the College of Vet-

erinary Medicine. Approval of college.
Faculty-directed individual study on an experimental, theoretical or applied problem. May involve a supervised off-campus experience.

## 295 **Biomedical Research and Regulatory Issues for Veterinary Technologists**

Fall. 1(1-0) P: VM 150 R: Open only to Veterinary Technology majors.

Principles and techniques of biomedical research, governance and regulation of animal care and use.

## 303 Anesthesiology for Veterinary Technicians

Fall. 2(2-0) P: VM 140 and VM 250 R: Open only to Veterinary Technology majors. C: VM 215 concurrently or VM 210 concurrently.

Pharmacologic action of preanesthetic and anesthetic drugs. Principles and techniques of induction, maintenance, monitoring, and recovery of the patient. Humane methods of euthanasia.

#### 304 **Radiology for Veterinary Technicians**

Spring. 2(1-2) P: VM 110 and VM 130 R: Open to undergraduate students in the Veterinary Technology major. Approval of college.

Production of radiographs, components of the x-ray machine, use of screens and grids, handling film, imaging quality, film processing, patient positioning, and radiation safety.

## 305 Hospital Practice Management for Veterinary Technologists

Spring. 2(2-0) P: VM 150 and VM 155 R: Open only to Veterinary Technology majors.

Veterinary practice economics, personnel management, inventory control and marketing techniques.

## 310 **Advanced Clinical Pathology Techniques** Spring. 1(0-2) P: VM 175 and VM 176 R: Open only to Veterinary Technology majors.

Advanced cytologic techniques including sample collection, processing and evaluation.

## 369 Introduction to Zoo and Aquarium Sci-

Spring. 3(3-0) Interdepartmental with Fisheries and Wildlife and Landscape Architecture and Zoology. Administered by Zoology. P: BS 162 or LB 144 or BS 182H

Fundamentals of zoo and aquarium operations including research, interpretation, design, nutrition, captive breeding, conservation, ethics and management.

## 410 Veterinary Technology Clerkship in Anesthesiology

Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 303 and VM 304 RB: Completion of preclinical coursework. R: Open only to Veterinary Technology majors.

Application of principles and techniques in anesthesiology.

## 411 Veterinary Technology Clerkship in Radiology

Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 303 and VM 304 RB: Completion of preclinical coursework. R: Open only to Veterinary Technology majors.

Application of principles and techniques in radiology.

# Veterinary Technology Clerkship in Companion Animal Medicine 412

Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 303 and VM 304 RB: Completion of pre-clinical course work. R: Open only to Veterinary Technology majors.

Application of principles and techniques in restraint, examination, nursing care, monitoring, and preventive medicine of companion animals.

# Veterinary Technology Clerkship in Companion Animal Surgery 413

Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 303 and VM 304 RB: Completion of preclinical coursework. R: Open only to Veterinary Technology majors.

Application of principles and techniques in surgical nursing

# Veterinary Technology Clerkship in Equine Medicine and Surgery 414

Fall, Spring, Summer. 3 credits. P: VM 415 RB: Completion of preclinical coursework. R: Open only to Veterinary Technology majors.

Application of principles and techniques in equine medicine and surgery.

## 415 Veterinary Technician Clerkship in Food **Animal and Equine Medicine and Surgery**

Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 303 and VM 304 RB: Completion of preclinical coursework. R: Open only to Veterinary Technology majors.

Application of principles and techniques in food animal and equine medicine and surgery.

# Veterinary Technology Clerkship in

Emergency Medicine
Fall, Spring, Summer. 3 credits. P: VM 412
RB: (VM 410 and VM 411 and VM 413) and Completion of preclinical coursework. R:

Open only to Veterinary Technology majors.

Application of principles and techniques in emergency medicine.

### Veterinary Technology Clerkship in 451 Cardiology

Fall, Spring, Summer. 3 credits. P: VM 412 RB: (VM 410 and VM 411 and VM 413) and Completion of preclinical coursework. R: Open only to Veterinary Technology majors.

Application of principles and techniques in cardiology.

### Veterinary Technology Clerkship in 452 Neurology

Fall, Spring, Summer. 3 credits. P: VM 412 RB: (VM 410 and VM 411 and VM 413) and Completion of preclinical coursework. R:

Open only to Veterinary Technology majors.

Application of principles and techniques in neurology and physical therapy.

## Veterinary Technology Clerkship in 453 Ophthalmology

Fall, Spring, Summer. 3 credits. P: VM 412 and VM 413 RB: (VM 410) and Completion of preclinical coursework. R: Open only to Veterinary Technology majors.

Application of principles and techniques in ophthal-

## 454 Veterinary Technology Clerkship in **Critical Care**

Fall, Spring, Summer. 3 credits. P: VM 412 RB: (VM 410 and VM 411 and VM 413) and Completion of preclinical coursework. R: Open only to Veterinary Technology majors.

Application of principles and techniques in critical

## Veterinary Technology Clerkship in 466 Large Animal Anesthesia

Fall, Spring, Summer. 3 credits. P: VM 410 and VM 415 RB: Completion of preclinical coursework. R: Open only to Veterinary Technology majors. SA: VM 460, VM 472

Application of principles and techniques of food animal and equine anesthesiology.

# Veterinary Technology Clerkship in Food **Animal Medicine**

Fall, Spring, Summer. 3 credits. P: VM 415 RB: Completion of preclinical coursework. R: Open only to Veterinary Technology majors.

Application of principles and techniques in food animal medicine.

# 480

Veterinary Technology Clerkship in Clinical Pathology Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 303 and VM 304 RB: Completion of preclinical coursework. R: Open only to Veterinary Technology majors.

Application of principles and techniques in clinical pathology.

## 482 Veterinary Technology Clerkship in Necropsy

Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 303 and VM 304 RB: Completion of preclinical coursework. R: Open only to Veterinary Technology majors.

Application of principles and techniques in postmortem examination of common domestic species with emphasis on specimen description, collection, and submission

## 483 Veterinary Technology Clerkship in Biomedical Research

Fall, Spring, Summer. 3 to 12 credits. A Fall, Spring, Sufficient S to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P: VM 270 and VM 275 and VM 303 and VM 304 RB: (VM 410 and VM 482) and Completion of the course of the Vote State of the Course of the Vote of the Course of the Course of the Vote of the Course of the Vote of the Course of the Vote of the Course of the Course of the Course of the Course of the Vote of the Course of the preclinical coursework. R: Open only to Veterinary Technology majors.

Application of principles and techniques in biomedical research involving laboratory animals.

## 484 Veterinary Technology Clerkship in Zoo and Wildlife Medicine

Fall, Spring, Summer. 3 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P: VM 270 and VM 275 and VM 303 and VM 304 RB: (VM 410) or Completion of preclinical coursework. R: Open only to Veterinary Technology majors.

Application of principles and techniques in zoo and wildlife medicine.

# Veterinary Technology Clerkship in Clinical Parasitology

Fall, Spring, Summer. 3 credits. P: VM 245 RB: Completion of preclinical coursework. R: Open only to Veterinary Technology ma-

Application of principles and techniques in clinical parasitology.

## 487 Veterinary Technology Clerkship in

Fall, Spring, Summer. 3 credits. RB: Completion of pre-clinical course work. R: Open only to Veterinary Technology majors.

Application of principles and techniques in dermatology.

## 490 Veterinary Technology Clerkship in Special Problems

Fall, Spring, Summer. 3 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P: VM 270 and VM 275 and VM 303 and VM 304 RB: Completion of the didactic core curriculum. R: Open only to Veterinary Technology majors.

Application of principles and techniques in experimental, therapeutic, or laboratory medicine.

# Clinical Competencies I

Fall. 2(1-2) R: Open professional students in the College of Veterinary Medicine.

Introduction to history taking, physical examination, and techniques associated with examination of various species.

## Ethical and Animal Welfare Issues in the 513 **Veterinary Profession**

Fall. 2(1-2) R: Open to graduateprofessional students in the College of Veterinary Medicine.

Identifying and communicating ethical challenges and animal welfare issues in the veterinary profes-

## 514

Comparative Lifestage Nutrition
Spring. 1(1-0) R: Open to graduateprofessional students in the College of Veterinary Medicine.

Nutritional assessment and management of the physiological stages of growth. Adult maintenance, gestation, lactation, performance, and geriatric concerns of common domestic species.

#### 524 **Basic Science in Clinical Medicine**

Spring. 1(0-2) R: Open to graduate-professional students in the College of Veterinary Medicine.

Integration of information learned in basic science courses by application to clinical cases.

#### **Veterinary Integrative Problem Solving** 532

Fall. 2(1-2) RB: Completion of Year 1 in the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine.

Integration of subject material from concurrent and previous courses using a problem-based learning

# 533

**Veterinary Epidemiology**Fall. 3(3-0) RB: Completion of Year 1 of the graduate-professional program in the college of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine.

Basic epidemiologic theory and study design. Veter-inary descriptive and inferential biostatistics. Production veterinary medicine.

#### 541 **Veterinary Career Development and Practice Management**

Spring. 2(2-0) R: Open to graduateprofessional students in the College of Veterinary Medicine.

Foundations of career development and practice management skills.

#### 543 Cardiovascular Diseases

Spring. 2(2-0) RB: Completion of year 1 of Spring. 2(2-0) RB: Completion of year 1 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine.

Cardiovascular diseases of domestic animals. Pathogenesis, diagnosis, and treatment.

#### **Veterinary Public Health** 544

Fall. 2(2-0) RB: Completion of year 1 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine.

Veterinary environmental, occupational, and public health. Milk and meat hygiene. Control of zoonotic diseases

#### 545 **Principles of Anesthesia and Surgery**

Spring. 4(3-2) RB: Completion of year 1 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine.

Administering anesthetic agents. Fundamentals of surgery including sterile technique, tissue handling, suture patterns, wound healing, and postoperative

#### 546 **Musculoskeletal Diseases**

Spring. 4(4-0) RB: Completion of year 1 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine.

Musculoskeletal diseases of domestic animals. Pathogenesis, diagnosis, and treatment.

#### 547 **Respiratory Diseases**

Fall, Spring. 2(2-0) RB: Completion of year 1 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine.

Respiratory diseases of domestic animals. Pathogenesis, diagnosis, and treatment.

#### 548 **Principles of Diagnostic Imaging**

Spring. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.

Basic principles of diagnostic imaging including radiographic physics, safety, interpretive principles and normal veterinary anatomy.

Applied Diagnostic Imaging
Fall, Spring. 1(0-2) RB: Completion of Year
1 of the graduate-professional program in
the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine.

Radiographic interpretation. Recognition of abnormalities. Development of verbal skills in image interpretation. Alternate imaging modalities.

# Theriogenology and Urinary Diseases

Fall. 5(4-2) RB: Completion of Year 2 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine.

Urogenital diseases of domestic animals. Pathogenesis, diagnosis, and treatment.

## 554 Hematological, Oncological and **Dermatological Diseases**

Fall. 3(3-0) RB: Completion of Year 2 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine.

Hematological, oncological and dermatological diseases of domestic animals. Pathogenesis, clinical presentation, diagnosis, and treatment.

### 555 **Neurological and Ophthalmological** Diseases

Fall. 3(3-0) RB: Completion of Year 2 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine.

Neurological and ophthalmological diseases of domestic animals. Pathogenesis, diagnosis, and treatment.

### **Operative Surgery** 557

Fall. 2(1-3) RB: Completion of Year 2 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine.

Soft tissue and orthopedic surgery of domestic animals. Preoperative evaluation, surgery, and postoperative care.

#### 558 **Digestive Diseases of Domestic Animals**

Fall. 3(3-0) RB: Completion of Year 2 of the graduate professional program in the College of Veterinary Medicine R: Open to graduate-professional students in the College of Veterinary Medicine.

Digestive diseases of domestic animals. Diagnosis, therapy, prophylaxis, and management.

# Metabolic and Endocrinological Diseases

Fall. 2(2-0) RB: Completion of Year 1 in the graduate professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the Col-

lege of Veterinary Medicine.
Pathogenesis, diagnosis, and treatment of metabolic and endocrinologic diseases of domestic animals.

# Veterinary Externship

Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Completion of 5 semesters of the graduate-professional program in the College of Veterinary Medi-

Clinical or research experience in an off-campus

#### 690 Special Problems in Veterinary Medicine

Fall, Spring. 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.

Individual study directed by a faculty member on an experimental, theoretical, or applied problem. May involve off-campus experience in a preceptorial

#### 692 Career Development and Business Skills

Spring. 3 credits. RB: Open only to graduate-professional students who have completed semester 5 of the graduate professional program in the College of Veterinary

Development of leadership, business and interpersonal skills, career planning, and goal setting.

## 810 Food Safety Introduction and **Professional Management**

Fall, Spring, Summer. 2 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course. RB: One year of college level science including one semester of microbiology. R: Open only to students in the Master of Science degree in Food Safety or approval of college.

Various food safety topics. Organizational, managerial, leadership and communication skills.

# **Evolution and Ecology of Foodborne Pathogens**

Spring. 3 credits. R: Open only to students in the Master of Science degree in Food Safety or approval of college.

Evolution of foodborne pathogens. Ecology of microbial organisms found in the food chain from introduction through human consumption.

#### 812 Food Safety Toxicology

Spring. 3 credits. R: Open only to students in the Master of Science degree in Food Safety or approval of college.

Nature and properties of toxic substances through the food chain. Nature and magnitude of hazards to human health.

#### 813 **Special Studies in Food Safety**

Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to students in the Master of Science degree in Food Safety or approval of college.

Faculty supervised independent study on an experimental, theoretical or applied project. May involve on-campus or off-campus experience.

#### 814 **Packaging for Food Safety**

Summer. 3 credits. Interdepartmental with Packaging. Administered by Veterinary Medicine. RB: Enrollment in graduate program in related field. R: Open to masters students in the Food Safety major and open to graduate students in the Packaging major or approval of college.

Current issues in packaging and food safety.

#### 815 **Applied Project in Food Safety**

Fall, Spring, Summer. 3 credits. P: VM 810 or approval of college R: Open to master's students in the Food Safety major or approval of college.

Faculty directed student project.

#### 817 **Pre-Harvest Food Safety**

Fall, Spring. 3 credits. RB: Enrollment in graduate program in related field. R: Open only to master's students in Food Safety or approval of college.

Principles for improvement of pre-harvest food safety. Emphasis on microbial, chemical, and toxic hazards. Strategies to reduce pre-harvest risks in many food production species.

# 820 **Current Topics in Comparative Medicine**

and Integrative Biology
Spring. 1 to 2 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Enrollment in graduateprofessional program or graduate program in the biomedical sciences.

R: Open to graduate students in the College of Veterinary Medicine.

Topics in comparative medicine using recently published literature to illustrate concepts.

#### 821 **Food Protection and Defense**

Fall, Spring. 3 credits. Interdepartmental with Criminal Justice. Administered by Veterinary Medicine. R: Open only to graduate students in the College of Veterinary Medicine or Food Safety major or Criminal Justice major or approval of college.

Food systems and criminal justice approaches to prepare for and solve issues relating to food safety and defense.

#### 822 **Aquatic Animal Medicine**

Fall. 3(2-2) Interdepartmental with Fisheries and Wildlife and Pathobiology and Diagnostic Investigation. Administered by Fisheries and Wildlife. RB: (FW 423) or prior course work in animal ecology, microbiology, parasitology or pathology

Health management techniques and pathobiological processes relating to the etiology, diagnosis, and control of diseases affecting aquatic animal populations and communities.

#### 828 **Food Safety Seminar Series**

Fall, Spring. 1(1-0) Interdepartmental with Agriculture and Natural Resources and Natural Science and Social Science. Administered by Veterinary Medicine. RB: Enrollment in graduate program in related discipline

Selected current topics covering the broad areas of food safety as they relate to production, processing, transport, microbiology, toxicology, and social and human dimensions.

#### **Problems in Food Safety** 829

Fall. 1(1-0) Interdepartmental with Agriculture and Natural Resources and Natural Science and Social Science. Administered by Veterinary Medicine. RB: Enrollment in graduate program in related discipline

In-depth discussion of selected problems in food safety.

#### 830 **Food Safety Research Methods**

Summer. 3(3-0) R: Open to graduate students in the College of Veterinary Medicine or approval of college.

Conducting and interpreting food safety research. Interpretation and critique of the literature, study design, and communication of food safety research.

## Foodborne Disease Epidemiology for the **Professional**

Summer. 3(3-0) R: Open to graduate students in the Food Safety major or approval of college.

Applied foodborne disease investigation through the use of case studies.

#### 832 Food Safety Disease Control

Summer. 3(3-0) R: Open to graduate students in the Food Safety major or approval of college.

Applied approaches to food borne disease control using case studies.

## 840 **Anti-Counterfeit Strategy and Product**

Summer. 3(3-0) Interdepartmental with Criminal Justice and Packaging. Administered by Veterinary Medicine. R: Open to graduate students in the School of Criminal Justice or in the School of Packaging or in the Food Safety major or approval of department.

Theory and applied techniques for anti-counterfeit strategies and product protection for food and consumer products.

# Master's Thesis Research

Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 18 credits in all enrollments for this course.

Masters thesis research.

# **Doctoral Dissertation Research**

Fall, Spring, Summer. 1 to 36 credits. A student may earn a maximum of 36 credits in all enrollments for this course.

Doctoral dissertation research.