VETERINARY MEDICINE

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: Approval of college.
Veterinary medical terminology, focusing on fundamental recognition, interpretation and usage of medical terms.

120 Veterinary Comparative Nutrition
Spring. 2(2-0) R: Approval of college.
Energy metabolism, nutrients and nutrient requirements of common domestic species.

130 Comparative Anatomy for Veterinary Nurses
Fall. 2(1-2) P: {(Completion of Tier I Writing Requirement) and (BS 161 and BS 171) or LB 145 R: Approval of college. C: VM 250 concurrently.
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 Nurses
Fall. 2(2-0) P: (MTH 101 and MTH 103) or MTH 103) and (MTH 114 or MTH 116 or MTH 124 or MTH 132 or MTH 152H) R: 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
Fall. 2(2-0) R: Approval of college. C: VM 110 concurrently and VM 140 concurrently.
Development of various modalities of professional and client communication skills.

155 Veterinary Nursing Careers and Professional Development
Spring. 1(1-0) R: Approval of college.
Career options in veterinary nursing, discussion of professional, ethical and legal considerations. Portfolio development, resume and cover-letter writing skills.

160 Small Animal Nursing Skills
Spring. 3(2-3) P: VM 110 and VM 130 and VM 140 and VM 150
Small animal nursing including principles of restraint, physical examination, medical management techniques, and behavior of common companion animals. Recognition of common canine and feline breeds.

165 Large Animal and Laboratory Animal Nursing Care Techniques
Fall. 2(1-2) P: VM 160 and VM 205
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.

170 Hematology and Immunology for Veterinary Nurses
Spring. 2(2-0) P: VM 250 and VM 110 C: VM 175 concurrently.
Structure and function of normal blood cells, cellular and humoral immunity, mechanisms of hemostasis, blood group serology, transfusion medicine and vaccinology.

175 Clinical Pathology Laboratory I for Veterinary Nurses
Spring. 1(0-2) P: VM 110 and VM 250 C: VM 170 concurrently.
Veterinary clinical pathology laboratory including diagnostic procedures in hematology, serology and ELISA methodology.

176 Clinical Pathology Laboratory II for Veterinary Nurses
Fall. 1(0-2) P: VM 175
Comprehensive veterinary clinical pathology laboratory, including diagnostic procedures in urology, dermatology, cytology, and advanced methods in hematology.

205 Preventive Animal Health Care for Veterinary Nurses
Spring. 3(3-0) P: VM 150 and VM 110
Development of husbandry techniques to enhance wellness and reduce the risk of disease, injury and stress in common domestic and exotic animals.

210 Surgical Nursing for Veterinary Nurses
Fall. 2(1-1) P: VM 160 and VM 130 and VM 250 R: Approval of department. C: VM 215 concurrently and VM 303 concurrently.
Role of the veterinary nurse as a member of the veterinary surgical team.

215 Surgical Nursing and Anesthetic Management Laboratory
Fall. 1(0-4) P: VM 160 and VM 130 and VM 250 C: VM 210 concurrently and VM 303 concurrently.
Principles and techniques in veterinary surgical nursing and anesthesia.

220 Radiology for Veterinary Nurses
Spring. 2(1-2) P: VM 140 and VM 176 and VM 205 RB: VM 250
Parasites of veterinary and public health importance, including gross and microscopic morphology, transmission and control.

245 Veterinary Comparative Clinical Pathology
Fall. 4(4-0) P: (Completion of Tier I Writing Requirement) and (BS 161 and BS 171) or LB 145 R: Approval of college. C: VM 130 concurrently.

250 Veterinary Pathology
Fall. 2(2-0) P: VM 150
Veterinary practice economics, personnel management, inventory control and marketing techniques.
337 Introduction to Foodborne Pathogens
Fall, Summer. 3(3-0): R: Open to graduate students in the Food Safety Major or approval of department.
Microbial classification, growth, genetics, epidemiology, transmission and ecology of major food and waterborne pathogens including bacteria, viruses, parasites, prions and protozoa.

369 Introduction to Zoo and Aquarium Science
Spring 3(3-0) Interdepartmental with Fisheries and Wildlife and Integrative Biology and Landscape Architecture. Administered by Integrative Biology. P: BS 162 or LB 144 or BS 182H SA: ZOL 369 Fundamentals of zoo and aquarium operations including research, interpretation, design, nutrition, captive breeding, conservation, ethics and management.

410 Veterinary Nursing Clerkship in Anesthesiology
Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 245 and VM 304 and completion of Tier I writing requirement RB: Completion of preclinical coursework.
Application of principles and techniques in anesthesiology.

411 Veterinary Nursing Clerkship in Radiology
Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 245 and VM 304 RB: Completion of preclinical coursework.
Application of principles and techniques in radiology.

412 Veterinary Nursing Clerkship in Companion Animal Medicine
Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 245 and VM 304 and completion of Tier I writing requirement RB: Completion of pre-clinical course work.
Application of principles and techniques in restraint, examination, nursing care, monitoring, and preventive medicine of companion animals.

413 Veterinary Nursing Clerkship in Companion Animal Surgery
Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 245 and VM 304 RB: Completion of preclinical coursework.
Application of principles and techniques in surgical nursing.

414 Veterinary Nursing Clerkship in Equine Medicine and Surgery
Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 304 RB: Completion of preclinical coursework.
Application of principles and techniques in equine medicine and surgery.

415 Veterinary Nursing Clerkship in Food Animal and Equine Medicine and Surgery
Fall, Spring, Summer. 3 to 6 credits. P: VM 270 and VM 275 and VM 304 RB: Completion of preclinical coursework.
Application of principles and techniques in food animal and equine medicine and surgery.

450 Veterinary Nursing 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.
Application of principles and techniques in emergency medicine.

451 Veterinary Nursing Clerkship in Cardiology
Fall, Spring, Summer. 3 credits. P: VM 412 RB: (VM 410 and VM 411 and VM 413) and Completion of preclinical coursework.
Application of principles and techniques in cardiology.

452 Veterinary Nursing Clerkship in Neurology
Fall, Spring, Summer. 3 credits. P: VM 412 RB: (VM 410 and VM 411 and VM 413) and Completion of preclinical coursework.
Application of principles and techniques in neurology and physical therapy.

453 Veterinary Nursing Clerkship in Ophthalmology
Fall, Spring, Summer. 3 credits. P: VM 412 and VM 413 RB: (VM 410) and Completion of preclinical coursework.
Application of principles and techniques in ophthalmology.

454 Veterinary Nursing 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.
Application of principles and techniques in critical care.

455 Veterinary Nursing Clerkship in Companion Animal Oncology
Fall, Spring, Summer. 3 credits. P: VM 412 and VM 413 RB: Completion of pre-clinical coursework.
Application of principles and techniques in companion animal oncology.

456 Veterinary Nursing Clerkship in Companion Animal Physical Rehabilitation
Fall, Spring, Summer. 3 credits. P: VM 412 RB: Completion of preclinical coursework.
Application of principles and techniques of companion animal physical rehabilitation, particularly those animals recovering from orthopedic and neurologic injuries and surgeries.

458 Veterinary Nursing Clerkship in Companion Animal Diagnostic Ultrasound
Fall, Spring, Summer. 3 credits. P: VM 411 RB: Completion of preclinical coursework.
Application of principles and techniques of diagnostic ultrasound.

466 Veterinary Nursing Clerkship in Large Animal Anesthesia
Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 303 and VM 304 RB: Completion of preclinical coursework. SA: VM 460, VM 472 Application of principles and techniques of food animal and equine anesthesia.

470 Veterinary Nursing Clerkship in Food Animal Medicine
Fall, Spring, Summer. 3 to 6 credits. P: VM 270 and VM 275 and VM 304 RB: Completion of preclinical coursework.
Application of principles and techniques in food animal medicine.

480 Veterinary Nursing Clerkship in Clinical Pathology
Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 303 and VM 245 RB: Completion of preclinical coursework.
Application of principles and techniques in clinical pathology.

482 Veterinary Nursing Clerkship in Necropsy
Fall, Spring, Summer. 3 credits. P: VM 270 and VM 275 and VM 303 and VM 245 RB: Completion of preclinical coursework.
Application of principles and techniques in postmortem examination of common domestic species with emphasis on specimen description, collection, and submission.

483 Veterinary Nursing Clerkship in Biomedical Research
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 and VM 245 RB: (VM 410 and VM 482) and Completion of preclinical coursework.
Application of principles and techniques in biomedical research involving laboratory animals.

484 Veterinary Nursing 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 and VM 245 RB: (VM 410) or Completion of preclinical coursework.
Application of principles and techniques in zoo and wildlife medicine.

486 Veterinary Nursing Clerkship in Clinical Parasitology
Fall, Spring, Summer. 3 credits. P: VM 245 RB: Completion of preclinical coursework.
Application of principles and techniques in clinical parasitology.

487 Veterinary Nursing Clerkship in Dermatology
Fall, Spring, Summer. 3 credits. P: VM 412 RB: Completion of pre-clinical course work.
Application of principles and techniques in dermatology.

490 Veterinary Nursing 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 and VM 245 RB: Completion of preclinical coursework.
Application of principles and techniques in experimental, therapeutic, or laboratory medicine.
500 Veterinary Science I  
Fall. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine.

Introduction to veterinary science. Evidence based medicine; host, animal and environmental interactions in health.

501 One Health I  
Fall. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.


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

Introduction to professionalism, basic communication skills, effective use of teams, medical ethics, health records, confidentiality, professional use of social media, and safe veterinary practices. Clinical doctoring skills, with emphasis on cutaneous, hematologic, immunologic, reproductive, and respiratory systems in health.

503 Veterinary Career and Practice Management I  
Fall. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.

Debt, budgets, financial risk assessment, financial planning, career development, work-life balance, and recognizing impaired physical or mental health and the need for professional help.

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

Veterinary medicine and public health. Introduction to veterinary interactions with the public, including disaster response and crisis communication. Relevant laws, regulations, and regulatory agencies.

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

Professionalism, communication, medical ethics, and social competence, including professional interactions, client communication, history taking, and recognizing cultural differences and their impact. Clinical doctoring skills, with emphasis on cardiovascular, digestive, endocrine, musculoskeletal, nervous, and urinary systems in health.

506 Veterinary Career and Practice Management II  
Spring. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.

Health teams, leadership, workplace behavior, DVM job market, and the process of securing DVM employment.

507 One Health III  
Fall. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.

Social issues of relevance to animals and the veterinary community. Emphasis on issues related to cutaneous, hematologic, immunologic, reproductive, and respiratory systems.

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

Professionalism, communication, medical ethics, social competence, and clinical doctoring skills, with emphasis on issues and skills involving disorders of the cutaneous, hematologic, immunologic, reproductive, and respiratory systems.

509 Veterinary Career and Practice Management III  
Fall. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.

Veterinary business finance including financial statement literacy and ratio analysis. Cost-of-care estimates and their communication to clients. Giving and receiving feedback, building positive work relationships, conflict management.

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

Social and medical issues of relevance to animals and the veterinary community. Emphasis on issues related to cardiovascular, digestive, endocrine, musculoskeletal, nervous, and urinary systems.

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

Professionalism, communication, medical ethics, social competence, and clinical doctoring skills, with emphasis on issues and skills involving disorders of the cardiovascular, digestive, endocrine, musculoskeletal, nervous, and urinary systems. Writing prescriptions, discharge instructions, and patient records. Managing emotions in work settings.

512 Ethical and Animal Welfare Issues in the Veterinary Profession  
Fall. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine.

Identifying and communicating ethical challenges and animal welfare issues in the veterinary profession.

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


514 Animals in Society  
Fall. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine.

Role of animals and veterinary medicine in society. Intersections of animal behavior, animal welfare, ethics, public health and regulatory medicine.

515 Musculoskeletal System I  
Fall. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.

Structure and function of the musculoskeletal system in health.

516 Nervous System I  
Fall. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.

Structure and function of the nervous system in health.

517 Cardiovascular System I  
Fall. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.

Structure and function of the cardiovascular system in health.

518 Urinary System I  
Fall. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.

Structure and function of the urinary system in health.

519 Immunologic and Hematologic Systems I  
Spring. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.

Structure and function of the immunological and hematologic systems in health.

520 Respiratory System I  
Spring. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.

Structure and function of the respiratory system in health.

521 Endocrine System I  
Spring. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.

Structure and function of the endocrine system in health.

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

Structure and function of the reproductive system in health.

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

Professionalism, communication, medical ethics, social competence, and clinical doctoring skills, with emphasis on issues and skills involving disorders of the cardiovascular, digestive, endocrine, musculoskeletal, nervous, and urinary systems. Writing prescriptions, discharge instructions, and patient records. Managing emotions in work settings.

524 Ethical and Animal Welfare Issues in the Veterinary Profession  
Fall. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine.

Identifying and communicating ethical challenges and animal welfare issues in the veterinary profession.

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


526 Animals in Society  
Fall. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine.

Role of animals and veterinary medicine in society. Intersections of animal behavior, animal welfare, ethics, public health and regulatory medicine.

527 Musculoskeletal System I  
Fall. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.

Structure and function of the musculoskeletal system in health.

528 Nervous System I  
Fall. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.

Structure and function of the nervous system in health.

529 Cardiovascular System I  
Fall. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.

Structure and function of the cardiovascular system in health.

530 Urinary System I  
Fall. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.

Structure and function of the urinary system in health.

531 Immunologic and Hematologic Systems I  
Fall. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine.

Immunologic and hematologic disorders of animals.
532 Veterinary Integrative Problem Solving
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 format.

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. Veterinary descriptive and inferential biostatistics. Production veterinary medicine.

534 Cutaneous System II
Fall. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
Cutaneous system disorders of animals.

535 Reproductive System II
Fall. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
Reproductive system disorders of animals.

536 Respiratory System II
Fall. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
Respiratory system disorders of animals.

537 Veterinary Career and Practice Management IV
Spring. 1(0-2) R: Open to graduate-professional students in the College of Veterinary Medicine.
Productivity and profitability, marketing, writing resumes and cover letters, interview strategies, professional development, and team selection, communication, and evaluation.

539 Veterinary Career and Practice Management V
Fall. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.
Medical records management, laws applicable to the practice of veterinary medicine, professional malpractice and board complaints, evaluating job offers, negotiating employment contracts, and interviewing.

543 Cardiovascular Diseases
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.

544 Veterinary Public Health
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 care.

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.

547 Respiratory Diseases
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.

549 Applied Diagnostic Imaging
Fall. 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.

553 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.

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.

557 Operative Surgery
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 credits. R: 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.

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

561 Private Practice Ownership
Spring. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.
Demographic studies, business entities, financing, leadership, business and marketing plans, and entrepreneurial ownership considerations when starting a practice or buying an existing practice.

565 Cardiovascular System II
Spring. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine.
Cardiovascular system disorders of animals.

568 Urinary System II
Spring. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
Urinary system disorders of animals.

569 Musculoskeletal System II
Spring. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine.
Musculoskeletal disorders of animals.

571 Nervous System II
Spring. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
Nervous system disorders of animals.

575 Digestive System II
Spring. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
Digestive system disorders of animals.

577 Endocrine System II
Spring. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
Endocrine system disorders of animals.

578 Clinical Reasoning I
Fall. 8(2-12) R: Open to graduate-professional students in the College of Veterinary Medicine.
Clinical reasoning in veterinary medicine.

579 Clinical Reasoning II
Fall. 7(2-10) R: Open to graduate-professional students in the College of Veterinary Medicine.
Advanced clinical reasoning skill development. Complex cases that involve multiple systems, animal populations, and public health implications.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>580</td>
<td>Veterinary Surgery and Anesthesia</td>
<td>Fall. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.</td>
</tr>
<tr>
<td>581</td>
<td>Clinical Reasoning III</td>
<td>Spring. 5(2-6) R: Open to graduate-professional students in the College of Veterinary Medicine.</td>
</tr>
<tr>
<td>582</td>
<td>Veterinary Clinical Experience</td>
<td>Spring. 3(0-6) R: Open to graduate-professional students in the College of Veterinary Medicine.</td>
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<tr>
<td>611</td>
<td>Veterinary Externship</td>
<td>Fall. Spring. 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course.</td>
</tr>
<tr>
<td>690</td>
<td>Special Problems in Veterinary Medicine</td>
<td>Fall, Spring. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course.</td>
</tr>
<tr>
<td>692</td>
<td>Career Development and Business Skills</td>
<td>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 Medicine.</td>
</tr>
<tr>
<td>693</td>
<td>Companion Animal Behavior Clerkship</td>
<td>Spring. 3(3-0) R: Open to veterinary medicine students in the College of Veterinary Medicine or approval of college.</td>
</tr>
<tr>
<td>810</td>
<td>Food Safety Introduction and Professional Management</td>
<td>Fall, Spring. 2 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course.</td>
</tr>
<tr>
<td>811</td>
<td>Evolution and Ecology of Foodborne Pathogens</td>
<td>Fall, Spring, Summer. 3 credits. R: Open to master's students in the Food Safety major or approval of college.</td>
</tr>
<tr>
<td>812</td>
<td>Food Safety Toxicology</td>
<td>Fall, Spring. 3 credits. R: Open to master's students in the Food Safety major or approval of college.</td>
</tr>
<tr>
<td>813</td>
<td>Special Studies in Food Safety</td>
<td>Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course.</td>
</tr>
<tr>
<td>814</td>
<td>Packaging for Food Safety</td>
<td>Sumner. 3 credits. Interdepartmental with Packaging. Administered by Veterinary Medicine.</td>
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<tr>
<td>815</td>
<td>Applied Project in Food Safety</td>
<td>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.</td>
</tr>
<tr>
<td>817</td>
<td>Livestock Pre-Harvest Food Safety</td>
<td>Spring. 3 credits. RB: Enrollment in graduate program in related field. R: Open to master's students in the Food Safety Major or approval of college.</td>
</tr>
<tr>
<td>820</td>
<td>Current Topics in Comparative Medicine and Integrative Biology</td>
<td>Fall, Spring. 1 to 2 credits. A student may earn a maximum of 6 credits in all enrollments for this course.</td>
</tr>
<tr>
<td>821</td>
<td>Food Protection and Defense</td>
<td>Fall, Spring. 3 credits. Interdepartmental with Criminal Justice. Administered by Veterinary Medicine.</td>
</tr>
<tr>
<td>824</td>
<td>Global Food Safety</td>
<td>Fall. 3(3-0) RB: Professional or graduate status with knowledge of food safety.</td>
</tr>
<tr>
<td>825</td>
<td>Quantifying Food Risk</td>
<td>Fall. 3(3-0) R: Open to graduate status with knowledge of food safety.</td>
</tr>
<tr>
<td>826</td>
<td>Creating a Food Safety Culture</td>
<td>Summer of odd years. 3(3-0) RB: Professional or graduate status with knowledge of food safety.</td>
</tr>
<tr>
<td>827</td>
<td>Food Safety Modernization Act and Hazard Analysis and Critical Control Point Systems</td>
<td>Spring. 3(3-0) R: Open to master's students in the Food Safety Major or approval of college.</td>
</tr>
<tr>
<td>830</td>
<td>Food Safety Research Methods</td>
<td>Fall, Summer. 3(3-0) R: Open to graduate students in the College of Veterinary Medicine or approval of college.</td>
</tr>
<tr>
<td>831</td>
<td>Foodborne Disease Epidemiology for the Professional</td>
<td>Fall. Summer. 3(3-0) R: Open to master's students in the Food Safety major or approval of college.</td>
</tr>
<tr>
<td>834</td>
<td>Current Issues in Food Safety</td>
<td>Fall, Spring. 3(3-0) R: Open to graduate students in the College of Veterinary Medicine or approval of college.</td>
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</table>

Various food safety topics. Organizational, management, leadership, and communication skills.
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<tr>
<th>Course Code</th>
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<th>Semester</th>
<th>Credits</th>
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<tbody>
<tr>
<td>835</td>
<td>Food Safety for Produce</td>
<td>Spring</td>
<td>3-3</td>
<td>R: Open to graduate students in the Food Safety Major or approval of department.</td>
<td>Overview of food safety requirements for the produce sector with a focus on Good Agriculture Practices (GAPS).</td>
</tr>
<tr>
<td>836</td>
<td>Food Safety Issues by Commodity</td>
<td>Spring</td>
<td>1 to 6</td>
<td>R: Open to graduate students in the College of Veterinary Medicine or in the Food Safety Major or approval of college.</td>
<td>Food safety issues specific to different commodity groups or segments of food industry including meat safety, dairy safety, beverage safety, pet food safety, ingredient safety, and food waste recovery.</td>
</tr>
<tr>
<td>840</td>
<td>Anti-Counterfeit Strategy and Product Protection</td>
<td>Summer</td>
<td>3(3-0)</td>
<td>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.</td>
<td>Theory and applied techniques for anti-counterfeit strategies and product protection for food and consumer products.</td>
</tr>
<tr>
<td>844</td>
<td>Food Fraud Prevention</td>
<td>Fall</td>
<td>3(3-0)</td>
<td>R: Open to graduate students in the College of Veterinary Medicine or in the Department of Large Animal Clinical Sciences or in the Food Safety Major or approval of college.</td>
<td>Theory and applied techniques for food fraud prevention strategies.</td>
</tr>
<tr>
<td>899</td>
<td>Master's Thesis Research</td>
<td>Fall, Spring, Summer</td>
<td>1 to 10</td>
<td>A student may earn a maximum of 18 credits in all enrollments for this course.</td>
<td>Masters thesis research.</td>
</tr>
<tr>
<td>999</td>
<td>Doctoral Dissertation Research</td>
<td>Fall, Spring, Summer</td>
<td>1 to 36</td>
<td>A student may earn a maximum of 36 credits in all enrollments for this course.</td>
<td>Doctoral dissertation research.</td>
</tr>
</tbody>
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