

Veterinary Medicine—VM

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.

200 Veterinary Systems Biology and Medical Science I Spring. 7(5-4) P:M: (CEM 141 and MTH 110) R: Open only to Veterinary Technology majors.

Multidisciplinary approach to the musculoskeletal system of animals. Integration of anatomy, physiology, pathophysiology, pharmacology, and nursing care of animals. Techniques of restraint. Patient management. Medical record keeping.

201 Veterinary Systems Biology and Medical Science II Spring. 7(5-4) P:M: (CEM 141 and MTH 110) R: Open only to Veterinary Technology majors.

Multidisciplinary approach to the hematopoietic and cardiovascular systems of animals. Integration of anatomy, physiology, pathophysiology, pharmacology, and nursing care related to health and disease.

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 only to Pre-Veterinary and Veterinary Technology majors.

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

300 Veterinary Systems Biology and Medical Science III Fall. 7(5-4) P:M: (VM 200 and VM 201) and completion of Tier I writing requirement. R: Open only to Veterinary Technology majors.

Multidisciplinary approach to the neurologic and respiratory systems of animals. Integration of anatomy, physiology, pathophysiology, pharmacology, and nursing care related to health and disease.

301 Veterinary Systems Biology and Medical Science IV Fall. 7(5-4) P:M: (VM 200 and VM 201) and completion of Tier I writing requirement. R: Open only to Veterinary Technology majors.

Multidisciplinary approach to the urinogenital and endocrine systems of animals. Integration of anatomy, physiology, pathophysiology, pharmacology, and nursing care related to health and disease.

302 Veterinary Systems Biology and Medical Science V Spring. 7(5-4) P:M: (VM 300 and VM 301) and completion of Tier I writing requirement. R: Open only to Veterinary Technology majors.

Multidisciplinary approach to the gastrointestinal and integumentary systems of animals. Integration of anatomy, physiology, pathophysiology, pharmacology, and nursing care related to health and disease.

303 Anesthesiology for Veterinary Technicians Spring. 2(3-2) P:M: (VM 300 and VM 301) R: Open only to Veterinary Technology majors.

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

304 Radiology for Veterinary Technicians Spring. 2(3-2) P:M: (VM 300 and VM 301) R: Open only to Veterinary Technology majors.

Fundamentals of radiology. Production of x-rays, components of the x-ray machine, use of screens and grids, handling film, imaging quality, film processing, patient positioning, and radiation safety. Offered half of semester.

369 Introduction to Zoo and Aquarium Science Spring. 3(3-0) Interdepartmental with Zoology; Landscape Architecture; Fisheries and Wildlife. Administered by Department of Zoology. P:M: (BS 110 or LBS 144 or LBS 148H)

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

400 Laboratory Animal Technology Fall. 2(1-2) P:M: (VM 302) R: Open only to senior students in the Veterinary Technology major.

Animal husbandry, nutrition, preventive medicine, and medical management of common laboratory animals. Pathophysiology of selected diseases.

401 Clinical and Anatomic Pathology for Veterinary Technologists Fall. 2(1-2) P:M: (VM 302) R: Open only to senior students in the Veterinary Technology major.

Advanced cytologic techniques encompassing sample collection, processing, and evaluation. Necropsy procedures including history collection, lesion description, specimen submission, and client education concerning necropsy reports.

402 Hospital Practice Management for Veterinary Technologists Spring. 3(3-0) R: Open only to senior students in the Veterinary Technology major.

Veterinary practice economics, personnel management, inventory control, and marketing techniques. Use of computerized models.

403 Companion Animal Nutrition and Behavior for Veterinary Technologists Spring. 2(2-0) P:M: (VM 302) and completion of Tier I writing requirement. R: Open only to senior students in the Veterinary Technology major.

Nutritional management of healthy and diseased canine and feline patients. Normal canine and feline behavior, behavioral abnormalities, and behavioral modification.

410 Veterinary Technology Clerkship in Anesthesiology Fall, Spring, Summer. 3 credits. P:M: (VM 302 and VM 303 and VM 304) 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:M: (VM 302 and VM 303 and VM 304) R: Open only to Veterinary Technology majors.

Application of principles and techniques in radiology.

412 Veterinary Technology Clerkship in Companion Animal Medicine Fall, Spring, Summer. 3 credits. P:M: (VM 302 and VM 303 and VM 304) R: Open only to Veterinary Technology majors.

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

413 Veterinary Technology Clerkship in Companion Animal Surgery Fall, Spring, Summer. 3 credits. P:M: (VM 302 and VM 303 and VM 304) R: Open only to Veterinary Technology majors.

Application of principles and techniques in surgical nursing.

414 Veterinary Technology Clerkship in Equine Medicine and Surgery Fall, Spring, Summer. 3 credits. P:M: (VM 302 and VM 303 and VM 304) R: Open only to Veterinary Technology majors.

Application of principles and techniques in equine medicine and surgery.

450 Veterinary Technology Clerkship in Emergency Medicine Fall, Spring, Summer. 3 credits. P:M: (VM 302 and VM 303 and VM 304) RB: (VM 412) R: Open only to Veterinary Technology majors.

Application of principles and techniques in emergency medicine.

451 Veterinary Technology Clerkship in Cardiology Fall, Spring, Summer. 3 credits. P:M: (VM 302 and VM 303 and VM 304) R: Open only to Veterinary Technology majors.

Application of principles and techniques in cardiology.

452 Veterinary Technology Clerkship in Neurology Fall, Spring, Summer. 3 credits. P:M: (VM 302 and VM 303 and VM 304) R: Open only to Veterinary Technology majors.

Application of principles and techniques in neurology and physical therapy.

453 Veterinary Technology Clerkship in Ophthalmology Fall, Spring, Summer. 3 credits. P:M: (VM 302 and VM 303 and VM 304) R: Open only to Veterinary Technology majors.

Application of principles and techniques in ophthalmology.

454 Veterinary Technology Clerkship in Critical Care Fall, Spring, Summer. 3 credits. P:M: (VM 412) R: Open only to Veterinary Technology majors.

Application of principles and techniques in critical care.

460 Veterinary Technology Clerkship in Equine Anesthesiology Fall, Spring, Summer. 3 credits. P:M: (VM 410 and VM 414) R: Open only to Veterinary Technology majors.

Application of principles and techniques in equine anesthesiology.

- 462 Veterinary Technology Clerkship in Advanced Equine Medicine and Surgery**
Fall, Spring, Summer. 3 credits. P:M: (VM 414) R: Open only to Veterinary Technology majors.
Application of principles and techniques in equine medicine and surgery.
- 470 Veterinary Technology Clerkship in Food Animal Medicine**
Fall, Spring, Summer. 3 credits. P:M: (VM 302 and VM 303 and VM 304) R: Open only to Veterinary Technology majors.
Application of principles and techniques in food animal medicine.
- 471 Veterinary Technology Clerkship in Production Medicine**
Fall, Spring, Summer. 3 credits. P:M: (VM 470) R: Open only to Veterinary Technology majors.
Application of principles and techniques in production medicine.
- 472 Veterinary Technology Clerkship in Food Animal Anesthesiology**
Fall, Spring, Summer. 3 credits. P:M: (VM 410 and VM 470) R: Open only to Veterinary Technology majors.
Application of principles and techniques in food animal anesthesiology.
- 480 Veterinary Technology Clerkship in Clinical Pathology**
Fall, Spring, Summer. 3 credits. P:M: (VM 302 and VM 303 and VM 304) R: Open only to Veterinary Technology majors.
Application of principles and techniques in clinical pathology.
- 481 Veterinary Technology Clerkship in Microbiology**
Fall, Spring, Summer. 3 credits. P:M: (VM 302 and VM 303 and VM 304) R: Open only to Veterinary Technology majors.
Application of principles and techniques in microbiology.
- 482 Veterinary Technology Clerkship in Necropsy**
Fall, Spring, Summer. 3 credits. P:M: (VM 302 and VM 303 and VM 304) 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 student may earn a maximum of 12 credits in all enrollments for this course. P:M: (VM 400) 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:M: (VM 410 and VM 414 and VM 411 and VM 412 and VM 413) R: Open only to Veterinary Technology majors.
Application of principles and techniques in zoo and wildlife medicine.
- 485 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:M: (VM 302) R: Open only to senior students in the Veterinary Technology major.
Application of principles and techniques in experimental, therapeutic, or laboratory medicine.
- 511 Veterinary Perspectives I**
Fall. 2(1-2) R: Open only to graduate-professional students in College of Veterinary Medicine.
Animal handling, restraint, and physical examination.
- 512 Veterinary Integrative Problem Solving I**
Fall. 1(1-0) R: Open only to graduate-professional students in College of Veterinary Medicine.
Integration of subject material from concurrent semester courses.
- 521 Veterinary Perspectives II**
Spring. 2(2-0) R: Open only to graduate-professional students in College of Veterinary Medicine. Not open to students with credit in VM 590.
Veterinary medical history and ethics. Client communication and animal behavior.
- 522 Veterinary Integrative Problem Solving II**
Spring. 3(3-0) R: Open only to graduate-professional students in College of Veterinary Medicine.
Integration of subject material from concurrent and previous semester courses.
- 532 Veterinary Integrative Problem Solving III**
Fall. 3(1-4) R: Completion of semester 2 of the graduate-professional program in the College of Veterinary Medicine.
Integration of subject material from concurrent and previous semester courses.
- 533 Veterinary Epidemiology**
Fall. 3(3-0) RB: Completion of semester 2 of the graduate-professional program in the college of Veterinary Medicine. Not open to students with credit in VM 549.
Basic epidemiologic theory and study design. Veterinary descriptive and inferential biostatistics. Production veterinary medicine.
- 541 Veterinary Perspectives III**
Spring. 2(2-0) RB: Completion of semester 2 of the graduate-professional program in the College of Veterinary Medicine. Not open to students with credit in VM 602.
Concepts and principles of veterinary practice management.
- 542 Veterinary Integrative Problem Solving IV**
Spring. 3(2-3) RB: Completion of semester 2 of the graduate-professional program in the College of Veterinary Medicine.
Integration of subject material from concurrent and previous courses.
- 543 Cardiovascular Diseases**
Spring. 2(2-0) RB: Completion of semester 2 of the graduate-professional program in the College of Veterinary Medicine.
Cardiovascular diseases of domestic animals. Pathogenesis, diagnosis, and treatment.
- 544 Veterinary Public Health**
Spring. 2(2-0) RB: Completion of semester 2 of the graduate-professional program in the College of Veterinary Medicine.
Veterinary environmental and 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 semester 2 of the graduate-professional program in the College of Veterinary Medicine. Not open to students with credit in VM 570 or VM 578.
Administering anesthetic agents. Fundamentals of surgery: sterile technique, tissue handling, suture patterns, wound healing, postoperative care.
- 546 Musculoskeletal Diseases**
Spring. 5(5-0) RB: Completion of semester 2 of the graduate-professional program in the College of Veterinary Medicine. Not open to students with credit in VM 582 or VM 592.
Musculoskeletal diseases of domestic animals. Pathogenesis, diagnosis, and treatment.
- 547 Respiratory Diseases**
Spring. 2(2-0) RB: Completion of semester 2 of the graduate-professional program in the College of Veterinary Medicine. Not open to students with credit in VM 574.
Respiratory diseases of domestic animals. Pathogenesis, diagnosis, and treatment.
- 552 Veterinary Integrative Problem Solving V**
Fall. 3(2-3) RB: Completion of semester 4 of the graduate-professional program in the College of Veterinary Medicine.
Integration of subject material from concurrent and previous semester courses.
- 553 Theriogenology and Urinary Diseases**
Fall. 5(4-2) RB: Completion of semester 4 of the graduate-professional program in the College of Veterinary Medicine. Not open to students with credit in VM 560 or VM 580.
Urogenital diseases of domestic animals. Pathogenesis, diagnosis, and treatment.
- 554 Hematological, Oncological and Dermatological Diseases**
Fall. 3(3-0) RB: Completion of semester 4 of the graduate-professional program in the College of Veterinary Medicine. Not open to students with credit in VM 562 or VM 568.
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 semester 4 of the graduate-professional program in the College of Veterinary Medicine. Not open to students with credit in VM 563 or VM 566.
Neurological and ophthalmological diseases of domestic animals. Pathogenesis, diagnosis, and treatment.
- 556 Digestive, Metabolic and Endocrinological Diseases**
Fall. 5(5-0) RB: Completion of semester 4 of the graduate-professional program in the College of Veterinary Medicine. Not open to students with credit in VM 540 or VM 576 or VM 586.
Digestive, metabolic, and endocrinological diseases of domestic animals. Pathogenesis, diagnosis, and treatment.

Veterinary Medicine—VM

- 557 Operative Surgery**
Fall. 2(1-3) RB: Completion of semester 4 of the graduate-professional program in the College of Veterinary Medicine. Not open to students with credit in VM 578 or VM 588 or VM 596.

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

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

Clinical or research experience in an off-campus setting.

- 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 mode.

- 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.

- 811 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**
Spring. 1 to 3 credits. A student may earn a maximum of 3 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.

- 815 Applied Project in Food Safety**
Fall, Spring, Summer. 6 credits. P:M: (VM 810) R: Open only to students in the Master of Science degree in Food Safety or approval of college.

Faculty directed student project.

- 818 The Epidemiology of Zoonotic Diseases**
Spring of odd years. 3(3-0)
Interdepartmental with Epidemiology. Administered by Department of Epidemiology. RB: (EPI 810) R: Open only to master's students in the Epidemiology major or approval of department.

Human susceptibility to diseases of animals. Modes of transmission, surveillance, and strategies for prevention of specific zoonotic diseases.

- 820 Current Topics in Comparative Medicine and Integrative Biology**
Spring. 2(2-0) A student may earn a maximum of 6 credits in all enrollments for this course. RB: Enrollment in graduate-professional program or graduate program in the biomedical sciences.

Selected topics in comparative medicine using recently published literature to illustrate concepts. Topics will change with instructor from semester to semester.

- 828 Food Safety Seminar Series**
Fall, Spring. 1(1-0) Interdepartmental with Agriculture and Natural Resources; Natural Science; Social Science. 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.

- 829 Problems in Food Safety**
Fall. 1(1-0) Interdepartmental with Agriculture and Natural Resources; Natural Science; Social Science. RB: Enrollment in graduate program in related discipline

In-depth discussion of selected problems in food safety.

- 899 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.

- 999 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.

WOMEN'S STUDIES

WS

Women's Studies Program College of Arts and Letters College of Social Science

- 201 Introduction to Women's Studies**
Fall, Spring, Summer. 4(4-0)

Diversity of women's situations in social, cultural, historical and international contexts. Focus on women as victims of oppression and as agents. Concepts basic to feminist thought: gender systems, patriarchy.

- 202 Introduction to Contemporary Feminist Theories**
Fall. 3(3-0) P:M: (WS 201) RB: Or approval of program. R: Not open to freshmen.

Contemporary feminist theories of patriarchy, oppression, liberation, sexuality, and the meaning of "woman." Influences of liberalism, Marxism, Freud. Intersections of sex, race, class, and ethnicity. Theories by women of color.

- 203 Bibliographic Methods for Women's Studies Research**
Fall of odd years. 3(3-0) P:M: Completion of Tier I writing requirement.

Women's studies as interdisciplinary knowledge. Bibliographic and reference sources. Library organization of information. Research problems.

- 204 Lesbian, Bisexual, and Gay Studies: Psychological and Cultural Issues**
Spring of odd years. 3(3-0)
Interdepartmental with Psychology.

Nature, origins, and development of sexual orientation and sexual identity in the context of personality, culture, and society. Multicultural and feminist perspectives on the relationship between sexual orientation and gender, race, class, ethnicity, and religion.

- 211 Introduction to Gender and Environmental Issues**
Spring. 3(3-0) Interdepartmental with Fisheries and Wildlife; Forestry; Environmental Economics and Policy; Resource Development. Administered by Department of Fisheries and Wildlife. R: Not open to freshmen. SA: PRM 211

The concept of gender. Overview of environment and habitat. Historical gender roles in environmental management. Gender-based theoretical perspectives. Case studies on developing and developed countries. Environmental management with emphasis on fisheries, wildlife and wetlands. Women environmental professionals.

- 225 Women and Language**
Fall. 3(3-0) Interdepartmental with Linguistics. Administered by Department of Linguistics and Germanic, Slavic, Asian and African Languages.

Women and language in societies around the world. Issues such as status and verbal politeness, importance of names, gender differences in language use, women's multilingualism, sexist language, gendered language development in children.

- 301 Sexual Violence Against Women and Children: Theory and Response**
Spring. 3(3-0) RB: (WS 201 Or WS 202 Or WS 203) R: Not open to freshmen.

Sexual violence against women and children from theoretical and applied perspectives. Rape, battering, incest and sexual harassment. Intersection of race, class, gender and violence. Individual and collective strategies to prevent or deter assault, race, class, gender and violence.

- 302 Jewish Women's Experiences and Writings**
Fall of even years. 3(3-0) RB: (WS 201 Or WS 202 Or WS 203) R: Not open to freshmen.

Diverse experiences of Jewish women from a multidisciplinary perspective. Gender construction of Jewish and majority women and men. Generations of immigrant Jewish women. Anti-Semitism. Jewish feminism. Political and economic issues.