

**Descriptions — Urban Planning
of
Courses**

SA: UP 894A, UP 894B

897. Research Writing Seminar

Fall. 2(2-0)

R: Open only to second-year master's students in the Urban and Regional Planning major. Research writing and presentation methods.

899. Master's Thesis Research

Fall, Spring, Summer. 1 to 4 credits. A student

may earn a maximum of 12 credits in all enrollments for this course.

P: UP 897 or concurrently. R: Approval of department.

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: CEM 141, MTH 110. R: Approval of college.

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: CEM 141, MTH 110. R: Approval of college.

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

300. Veterinary Systems Biology and Medical Science III

Fall. 7(5-4)

P: VM 200, VM 201. R: Open only to students in Veterinary Technology. Completion of Tier I writing requirement. Approval of college.

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: VM 200, VM 201. R: Open only to students in Veterinary Technology. Completion of Tier I writing requirement. Approval of college.

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: VM 300, VM 301. R: Open only to students in Veterinary Technology. Completion of Tier I writing requirement. Approval of college.

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 credits.

P: VM 300, VM 301. R: Open only to students in Veterinary Technology. Approval of college.

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 credits.

P: VM 300, VM 301. R: Open only to students in Veterinary Technology. Approval of college.

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 credits. Interdepartmental with Zoology, Landscape Architecture, and Fisheries and Wildlife. Administered by Zoology.

P: BS 110.

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: VM 300, VM 301, VM 302. R: Open only to seniors in Veterinary Technology. Approval of college.

Animal husbandry, nutrition, preventative 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: VM 300, VM 301, VM 302. R: Open only to seniors in Veterinary Technology. Approval of college.

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 seniors in Veterinary Technology. Approval of college.

Veterinary practice economics, personnel management, inventory control, and marketing techniques. Lecture material is reinforced through the utilization of computerized models.

403. Companion Animal Nutrition and Behavior for Veterinary Technologists

Spring. 2(2-0)

P: VM 300, VM 301, VM 302. R: Open only to seniors in Veterinary Technology. Completion of Tier I writing requirement. Approval of college.

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

404. Equine and Food Animal Nutrition and Husbandry

Spring. 2(2-0)

P: VM 300, VM 301, VM 302. R: Open only to seniors in Veterinary Technology. Completion of Tier I writing requirement. Approval of college.

Comparative nutrition, feeding behaviors, and husbandry as applied to equine and food animal patients. Individual and herd information.

410. Veterinary Technology Clerkship in Anesthesiology

Fall, Spring, Summer. 3 credits.

P: VM 302, VM 303, VM 304. R: Approval of college. Application of principles and techniques in anesthesiology.

411. Veterinary Technology Clerkship in Radiology

Fall, Spring, Summer. 3 credits.

P: VM 302, VM 303, VM 304. R: Approval of college. Application of principles and techniques in radiology.

412. Veterinary Technology Clerkship in Companion Animal Medicine

Fall, Spring, Summer. 3 credits.

P: VM 302, VM 303, VM 304. R: Approval of college. Application of principles and techniques in restraint, examination, nursing care, monitoring, and preventative medicine of companion animals.

413. Veterinary Technology Clerkship in Companion Animal Surgery

Fall, Spring, Summer. 3 credits.

P: VM 302, VM 303, VM 304. R: Approval of college. Application of principles and techniques in surgical nursing.

414. Veterinary Technology Clerkship in Equine Medicine and Surgery

Fall, Spring, Summer. 3 credits.

P: VM 302, VM 303, VM 304. R: Approval of college. Application of principles and techniques in equine medicine and surgery.

450. Veterinary Technology Clerkship in Emergency Medicine

Fall, Spring, Summer. 3 credits.

P: VM 412. R: Approval of college. Application of principles and techniques in emergency medicine.

451. Veterinary Technology Clerkship in Cardiology

Fall, Spring, Summer. 3 credits.

P: VM 302, VM 303, VM 304. R: Approval of college. Application of principles and techniques in cardiology.

452. Veterinary Technology Clerkship in Neurology

Fall, Spring, Summer. 3 credits.

P: VM 302, VM 303, VM 304. R: Approval of college. Application of principles and techniques in neurology and physical therapy.

453. Veterinary Technology Clerkship in Ophthalmology

Fall, Spring, Summer. 3 credits.

P: VM 302, VM 303, VM 304. R: Approval of college. Application of principles and techniques in ophthalmology.

454. Veterinary Technology Clerkship in Critical Care

Fall, Spring, Summer. 3 credits.

P: VM 412. R: Approval of college. Application of principles and techniques in critical care.

460. Veterinary Technology Clerkship in Equine Anesthesiology

Fall, Spring, Summer. 3 credits.

P: VM 410, VM 414. R: Approval of college. Application of principles and techniques in equine anesthesiology.

461. Veterinary Technology Clerkship in Equine Field Service

Fall, Spring, Summer. 3 credits.

P: VM 414. R: Approval of college. Application of principles and techniques in equine field service.

- 462. Veterinary Technology Clerkship in Advanced Equine Medicine and Surgery**
Fall, Spring, Summer. 3 credits.
P: VM 414. R: Approval of college.
Application of principles and techniques in equine medicine and surgery.
- 470. Veterinary Technology Clerkship in Food Animal Medicine**
Fall, Spring, Summer. 3 credits.
P: VM 302, VM 303, VM 304. R: Approval of college.
Application of principles and techniques in food animal medicine.
- 471. Veterinary Technology Clerkship in Production Medicine**
Fall, Spring, Summer. 3 credits.
P: VM 470. R: Approval of college.
Application of principles and techniques in production medicine.
- 472. Veterinary Technology Clerkship in Food Animal Anesthesiology**
Fall, Spring, Summer. 3 credits.
P: VM 410, VM 470. R: Approval of college.
Application of principles and techniques in food animal anesthesiology.
- 480. Veterinary Technology Clerkship in Clinical Pathology**
Fall, Spring, Summer. 3 credits.
P: VM 302, VM 303, VM 304. R: Approval of college.
Application of principles and techniques in clinical pathology.
- 481. Veterinary Technology Clerkship in Microbiology**
Fall, Spring, Summer. 3 credits.
P: VM 302, VM 303, VM 304. R: Approval of college.
Application of principles and techniques in microbiology.
- 482. Veterinary Technology Clerkship in Necropsy**
Fall, Spring, Summer. 3 credits.
P: VM 302, VM 303, VM 304. R: Approval of college.
Application of principles and techniques in post mortem 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: VM 400. R: Approval of college.
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 410, VM 411, VM 412, VM 413, VM 414. R: Approval of college.
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: VM 300, VM 301, VM 302. R: Open only to seniors in Veterinary Technology. Approval of college.
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)
P: Completion of semester 2 of the graduate-professional program in the college of Veterinary Medicine. R: 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)
P: Completion of semester 2 of the graduate-professional program in the College of Veterinary Medicine. R: 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)
P: 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)
P: 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)
P: 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)
P: Completion of semester 2 of the graduate-professional program in the College of Veterinary Medicine. R: 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)
P: Completion of semester 2 of the graduate-professional program in the College of Veterinary Medicine. R: 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)
P: Completion of semester 2 of the graduate-professional program in the College of Veterinary Medicine. R: 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)
P: 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)
P: Completion of semester 4 of the graduate-professional program in the College of Veterinary Medicine. R: 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)
P: Completion of semester 4 of the graduate-professional program in the College of Veterinary Medicine. R: Not open to students with credit in VM 568 or VM 562.
Hematological, oncological and dermatological diseases of domestic animals. Pathogenesis, clinical presentation, diagnosis and treatment.
- 555. Neurological and Ophthalmological Diseases**
Fall. 3(3-0)
P: Completion of semester 4 of the graduate-professional program in the College of Veterinary Medicine. R: 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)
P: Completion of semester 4 of the graduate-professional program in the College of Veterinary Medicine. R: Not open to students with credit in VM 576 or VM 586 or VM 540.
Digestive, metabolic, and endocrinological diseases of domestic animals. Pathogenesis, diagnosis, and treatment.
- 557. Operative Surgery**
Fall. 2(1-3)
P: Completion of semester 4 of the graduate-professional program in the College of Veterinary Medicine. R: 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.

**Descriptions — Veterinary Medicine
of
Courses**

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.

818. The Epidemiology of Zoonotic Diseases
Spring of odd-numbered years. 3(3-0) Interdepartmental with Human Medicine. Administered by Human Medicine.
P: HM 810. R: Open only to master's students in Epidemiology or approval of college. Human susceptibility to diseases of animals. Modes of transmission, surveillance, and strategies for prevention of specific zoonotic diseases.

211. Introduction to Gender and Environmental Issues
Spring. 3(3-0) Interdepartmental with Fisheries and Wildlife, Resource Development, Forestry, and Public Resource Management. Administered by Fisheries and Wildlife.
R: Not open to freshmen.
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.

301. Sexual Violence Against Women and Children: Theory and Response
Spring. 3(3-0)
P: 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-numbered years. 3(3-0)
P: 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.

400. Women in Classical Greek Society
Spring of odd-numbered years. 3 credits. Interdepartmental with Classical Studies. Administered by Classical Studies.
R: Not open to freshmen and sophomores.
Image, role, and status of women in Greek society as seen through literary sources.

401. Feminist Theory
Spring. 4(4-0)
P: WS 201, WS 202. R: Not open to freshmen and sophomores.
Integrative and multidisciplinary approaches to theory in women's studies. Conceptualization of sex and gender and the subordination of women. Feminist critique of theories of knowledge. Comparison of evolving feminist theories.

403. Women and Change in Developing Countries
Spring. 3(3-0)
P: WS 201; WS 202 or WS 203. R: Not open to freshmen and sophomores.
Effects of economic, political, and social change on women in developing countries. Interrelationships of gender, class, race, and nationality.

404. Women and the Law in the United States
Fall of odd-numbered years, Spring of odd-numbered years. 3(3-0)
P: WS 201 or WS 202 or WS 203. R: Not open to freshmen or sophomores.
Law in the United States as a vehicle for structuring and maintaining women's social roles, and for social change.

405. Feminist Analyses of Education in the United States
Fall of odd-numbered years. 3(3-0) Interdepartmental with Teacher Education.
P: WS 201 or WS 202 or WS 203. R: Not open to freshmen or sophomores.
Feminist perspectives on the role of gender in structuring educational experiences in elementary and secondary school.

413. Families in Historical Perspective
Fall. 3 credits. Interdepartmental with History. Administered by History.
R: Not open to freshmen.
Family forms and socio-economic change in Europe and United States. Gender, childhood, courtship, sexual relations, marriage, divorce, childbearing, and old age in peasant, industrial and postindustrial society. War, welfare state, and the family. Themarginalized: vagrants, foundlings, immigrants, and single mother

420. History of Sexuality since the 18th Century
Fall, Spring. 3 credits. Interdepartmental with History. Administered by History.
R: Not open to freshmen.
Changing gender roles, sex in the Victorian era, prostitution, pornography, birth control, emergence of homo- and heterosexuality, sex under fascism, the sexual revolution, contemporary conflicts

425. Women and Criminal Justice
Spring of even-numbered years. 3(3-0) Interdepartmental with Criminal Justice. Administered by Criminal Justice.
P: CJ 220 or WS 201. R: Open only to juniors in Criminal Justice and Women's Studies.
Theories on women's victimization and criminality. Women's experiences as victims, offenders, and criminal justice employees. Laws and their effects on the rights of women in the criminal justice system.

453. Women and Work: Issues and Policy Analysis
Spring. 3(3-0) Interdepartmental with Public Resource Management and Economics. Administered by Public Resource Management.
P: EC 201 or EC 202 or PRM 201 or concurrently. R: Not open to freshmen and sophomores.
Current and past quantity and quality of women's participation in the labor force. Gender differentials in earnings, and occupations. Employment discrimination. Laws, especially affirmative action laws. Social policy effects. International issues.

482. Theory and Practice of Feminist Literary Criticism
Spring. 3 credits. Interdepartmental with English. Administered by English.
P: ENG 353 or WS 202. R: Not open to freshmen and sophomores except with approval of department. Open only to majors in English and in Women's Studies, and to juniors and seniors with a teaching minor in English. Completion of Tier I writing requirement.
Feminist literary critical theory and its implications for reading and studying literature.

490. Independent Study
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course.
P: WS 201 or WS 202 or WS 203. R: Open only to juniors or seniors; approval of program.
Individual reading and research on women and gender.

491. Special Topics
Fall, Spring. 3 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course.
P: WS 201 or WS 202 or WS 203. R: Not open to freshmen or sophomores.
In-depth study of special topic emphasizing women and gender.

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: WS 201 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-numbered years. 3(3-0)
P: 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-numbered 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.