

Descriptions — Urban Planning of Courses

- 834. Urban Design and Project Development**
Spring. 3(1-4)
P: UP 801. R: Open only to graduate students in Urban and Regional Planning.
Design of development projects. Integration of structures, spaces, activities, and design elements in various urban settings.
- 838. Land Use Law**
Spring. 3(3-0) Interdepartmental with Resource Development, Agricultural Economics, and Forestry. Administered by Resource Development.
P: RD 430.
Public and private land use controls in the U.S. Civil rights, housing, energy problems, growth management, waste management, and land conservation. Cases, statutes and other regulations.
- 844. Decision Theory for Urban Planning and Development**
Spring. 3(3-0)
P: UP 801 or two graduate courses in the Master of Public Administration program.
Planning and development process. Political decision-making in the planning context. Professional ethics and practice.
- 848. Urban Policy Analysis**
Spring. 3(3-0)
History of national urban policy. Developmental stages in processing new public policies.
- 854. Economics of Planning and Development**
Spring. 3(3-0) Interdepartmental with Geography.
P: UP 801.
The physical urban environment and local economic development.
- 865. Planning and Development Law**
Fall. 3(3-0)
P: UP 801.
Constitutional and statutory bases for planning and development. Effects of case law on design, administration, and implementation of regulations.
- 867. Methods and Modeling in Regional Science**
Spring of even-numbered years. 3(3-0) Interdepartmental with Geography and Resource Development. Administered by Geography.
P: EC 820, GEO 865; GEO 415 or RD 461.
Techniques for regional research: economic base analysis, input-output analysis, mathematical programming, and econometric and simulation analysis.
- 889. Master's Research**
Fall, Spring, Summer. 3 credits.
R: Open only to graduate students in Urban and Regional Planning. Approval of department.
Supervised individual research for Plan B master's program.
- 890. Independent Study**
Fall, Spring, Summer. 2 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course.
R: Approval of department.
Faculty-supervised study in aspects of urban planning.
- 893. Internship in Urban Planning**
Fall, Spring, Summer. 2 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course.
R: Approval of department.
Supervised individual experience in approved agencies and departments in the Lansing area.

- 894A. Planning Practicum I**
Fall. 2(0-4)
R: Open only to graduate students in Urban Planning.
Professional practice in the collection, analysis, and synthesis of information by students or student groups under faculty supervision. Developing solutions to specific urban problems.
- 894B. Planning Practicum II**
Spring. 2(0-4)
P: UP 894A. R: Open only to graduate students in Urban Planning.
Professional practices in the preparation of plans appropriate to the study area and subject matter examined in UP 894A. Designing statutory measures and administrative policies for implementation.
- 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.
R: Approval of department.

VETERINARY MEDICINE VM

College of Veterinary Medicine

- 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.
- 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.

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- 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.
- 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.

WOMEN'S STUDIES

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

- 201. Introduction to Women's Studies**
Fall, Spring. 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 even-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. 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.
- 301. Sexual Violence Against Women and Children: Theory and Response**
Spring. 3(3-0)
P: WS 201. 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.

WS

- 302. Jewish Women's Experiences and Writings**
Spring. 3(3-0)
P: WS 201. 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**
Fall. 3(3-0) Interdepartmental with Classical Studies. Administered by Classical Studies.
R: Not open to freshmen and sophomores.
Images, roles, and statuses 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**
Spring. 3(3-0)
P: WS 201; WS 202 or WS 203. R: Not open to freshmen and 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. 3(3-0) Interdepartmental with Teacher Education.
P: WS 201; WS 202 or WS 203. R: Not open to freshmen and sophomores.
Feminist perspectives on the role of gender in structuring educational experiences in elementary and secondary school.
- 420. History of Sexuality since the 18th Century**
Fall, Spring. 3(3-0) Interdepartmental with History. Administered by History.
R: Not open to freshmen and sophomores.
Changes in sexual attitudes and practices since 18th century. Development of the concept of sexuality. Primary focus on Germany, France and England.
- 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.