

URBAN PLANNING

834*. *Urban Design and Project Development*
 Spring. 3(1-4)
 P: UP 801
 Design of development projects. Integration of structures, spaces, activities, and design elements in various urban settings.
 QP: UP 828 QA: UP 836

844*. *Decision Theory for Urban Planning and Development*
 Spring. 3(3-0)
 P: UP 801 or R: two graduate courses in the Master of Public Administration program. Planning and development process. Political decisionmaking in the planning context. Professional ethics and practice.
 QP: UP 808 QA: UP 816 UP 818

848*. *Urban Policy Analysis*
 Spring. 3(3-0)
 R: Graduate Students
 History of national urban policy. Stages in the public policy process and the development of new policies.
 QA: UP 803

854*. *Economics of Planning and Development*
 Spring. 3(3-0)
 P: UP 801
 The physical urban environment and local economic development.
 QP: UP 808 QA: UP 462 OR UP 473

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. Experience in legal research.
 QP: UP 816 ORUP 808 QA: UP 824 UP 472

889*. *Master's Research*
 Fall, Spring, Summer. 3(0.-3)
 P: Approval of Program R: Graduate Students
 QA: UP 898

890*. *Independent Study*
 Fall, Spring, Summer. 2 to 4 credits.
 R: Approval of department.
 Faculty-supervised study in aspects of urban planning.
 QA: UP 800

893*. *Internship in Urban Planning*
 Fall, Spring, Summer. 2 to 4 credits.
 May reenroll for a maximum of 8 credits.
 P: Approval of department.
 Supervised individual experience in approved agencies and departments in the Lansing area.
 QA: UP 889

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.
 QA: UP 834

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.
 QP: UP 834 QA: UP 835

899*. *Master's Thesis Research*
 Fall, Spring, Summer. 1 to 4 credits.
 P: Approval of program
 QA: UP 899

VETERINARY MEDICINE VM

511*. *Veterinary Perspectives I*
 Fall. 2(2-0)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine
 Veterinary Medicine none
 Animal handling, restraint and physical examination.

512*. *Veterinary Integrative Problem Solving I*
 Fall. 1(1-0)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine
 Veterinary Medicine none
 Integration of subject material from concurrent semester courses.

521*. *Veterinary Perspectives II*
 Spring. 2(2-0)
 P: Admission to the College of Veterinary Medicine R: College of Veterinary Medicine
 Veterinary Medicine none
 Veterinary medical ethics, history, client communication, and animal behavior.

522*. *Veterinary Integrative Problem Solving II*
 Spring. 3(2-2)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine
 Veterinary Medicine none
 Integration of subject material from concurrent and previous semester courses.

532*. *Veterinary Integrative Problem Solving III*
 Fall. 3(2-3)
 P: Admission to the College of Veterinary Medicine R: College of Veterinary Medicine
 Veterinary Medicine none
 Integration of subject material from concurrent and previous semester courses.

533*. *Veterinary Epidemiology*
 Fall. 3(3-0)
 P: Admission to the College of Veterinary Medicine R: College of Veterinary Medicine
 Veterinary Medicine none
 Basic epidemiologic theory and study design; veterinary descriptive and inferential biostatistics; production veterinary medicine.

540*. *Metabolic Diseases*
 Fall. 1(1-0)
 P: Completion of Year 1 of the College of Veterinary Medicine. R: Year 2 College of Veterinary Medicine
 Veterinary Medicine none
 Biochemical and physiological basis of metabolic and endocrine diseases of animals including diagnosis, treatment and management.

541*. *Veterinary Perspectives III*
 Spring. 2(2-0)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine
 Veterinary Medicine none
 Concepts and principles of veterinary practice management.

542*. *Veterinary Integrative Problem Solving IV*
 Spring. 3(2-3)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine
 Veterinary Medicine none
 Integration of subject material from concurrent and previous courses.

543*. *Cardiovascular Diseases*
 Spring. 2(2-0)
 P: Admission to the College of Veterinary Medicine R: College of Veterinary Medicine
 Veterinary Medicine none
 Cardiovascular diseases of domestic animals with emphasis on pathogenesis and principles of diagnosis and treatment.

544*. *Veterinary Public Health*
 Spring. 2(2-0)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine
 Veterinary Medicine none
 Veterinary environmental and occupational health; milk hygiene; meat hygiene; veterinary public health; control of zoonotic diseases.

545*. *Principles of Anesthesia and Surgery*
 Spring. 4(3-2)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine
 Veterinary Medicine none
 Principles and techniques of administering anesthetic agents; fundamentals of surgery including principles of sterile technique, tissue handling, suture patterns, wound healing and postoperative care.

546*. *Musculoskeletal Diseases*
 Spring. 5(5-0)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine
 Veterinary Medicine none
 Musculoskeletal diseases of domestic animals, with emphasis on pathogenesis and principles of diagnosis and treatment.

547*. *Respiratory Diseases*
 Spring. 2(2-0)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine
 Veterinary Medicine none
 Respiratory diseases of domestic animals, with emphasis on pathogenesis and principles of diagnosis and treatment.

548*. *Principles of Radiology*
 Fall. 1(1-0)
 P: Completion of Year 1 of the College of Veterinary Medicine. R: Year 2 College of Veterinary Medicine
 Veterinary Medicine none
 Fundamentals of veterinary radiology. Normal radiographic anatomy. Principles of radiographic interpretation. Radiation safety.

549*. *Veterinary Epidemiology*
 Fall. 3(3-0)
 P: Completion of Year 1 of the College of Veterinary Medicine. R: Year 2 College of Veterinary Medicine
 Veterinary Medicine none
 Meaning and relevancy of biostatistics in veterinary medicine. Descriptive and inferential statistics. Study design and critical literature review. Disease determinants, ecology, distribution and populations at risk analytic-clinical investigation.

VETERINARY MEDICINE

- 550*. Preventive Veterinary Medicine and Public Health**
 Spring. 3(3-0)
 P: Completion of Year 1 of the College of Human Medicine. R: Year 2 College of Veterinary Medicine Veterinary Medicine none
 Public health aspects of veterinary medicine. Preventive and regulatory medicine including meat and milk hygiene, water supply and treatment, solid and liquid waste treatment and disposal and zoonosis.
- 552*. Veterinary Integrative Problem Solving V**
 Fall. 3(2-3)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine Veterinary Medicine none
 Integration of subject material from concurrent and previous semester courses.
- 553*. Theriogenology and Urinary Diseases**
 Fall. 5(5-0)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine Veterinary Medicine none
 Urogenital diseases of domestic animals, with emphasis on pathogenesis and principles of diagnosis and treatment.
- 554*. Hematological, Oncological and Dermatological Diseases**
 Fall. 3(3-0)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine Veterinary Medicine none
 Hematological, oncological and dermatological diseases of domestic animals with emphasis on pathogenesis, clinical presentation and principles of diagnosis and treatment.
- 555*. Neurological and Ophthalmological Diseases**
 Fall. 3(3-0)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine Veterinary Medicine none
 Neurological and ophthalmological diseases of domestic animals, with emphasis on pathogenesis and principles of diagnosis and treatment.
- 556*. Digestive, Metabolic and Endocrinological Diseases**
 Fall. 5(5-0)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine Veterinary Medicine none
 Digestive, metabolic, and endocrinological diseases of domestic animals with emphasis on pathogenesis and principles of diagnosis and treatment.
- 557*. Operative Surgery**
 Fall. 2(1-3)
 P: Admission to the College of Veterinary Medicine. C: no R: College of Veterinary Medicine. Veterinary Medicine none
 Soft tissue and orthopedic surgery of domestic animals, including preoperative evaluation, surgery and postoperative care.
- 560*. Urinary System**
 Spring. 2(2-0)
 P: Completion of Year 1 of the College of Veterinary Medicine. R: Year 2 College of Veterinary Medicine Veterinary Medicine none
 Normal and abnormal structure and function, diagnostic methods, and the medical and surgical manipulation of the urinary system.
- 561*. Core of Medicine Laboratories I**
 Spring. 1(0-3)
 P: Completion of Year 1 of the College of Veterinary Medicine. R: Year 2 College of Veterinary Medicine Veterinary Medicine none
 Classification, diagnosis and treatment of diseases of the urinary, hematopoietic, nervous, integumentary and visual systems of animals.
- 562*. Hematopoietic System**
 Spring. 2(2-0)
 P: Completion of Year 1 of the College of Veterinary Medicine. R: Year 2 College of Veterinary Medicine Veterinary Medicine none
 Normal structure and function of the hematopoietic system and pathophysiologic effects of hematopoietic diseases. Clinical manifestations, laboratory evaluation and medical management.
- 563*. Visual System**
 Spring. 1(1-0)
 P: Completion of Year 1 of the College of Veterinary Medicine. R: Year 2 College of Veterinary Medicine Veterinary Medicine none
 Methods of examination, diagnosis and treatment of ocular diseases.
- 564*. Survey of Infectious Agents**
 Spring. 2(2-0)
 P: Completion of Year 1 of the College of Veterinary Medicine. R: Year 2 College of Veterinary Medicine Veterinary Medicine none
 Host-microorganism relationship in diseases of animals; laboratory diagnosis, treatment, control, and public health significance.
- 566*. Nervous System**
 Spring. 2(2-0)
 P: Completion of Year 1 of the College of Veterinary Medicine. R: Year 2 College of Veterinary Medicine Veterinary Medicine none
 Normal and abnormal neural structure and function in animals with emphasis on clinical neurology and neuropathology.
- 568*. Integumentary System**
 Spring. 2(2-0)
 P: Completion of Year 1 of the College of Veterinary Medicine. R: Year 2 College of Veterinary Medicine Veterinary Medicine none
 Diseases of the integumentary system of animals with emphasis on laboratory examinations, interpretations of pathological features, diagnosis and treatment.
- 570*. Principles of Anesthesia**
 Fall. 1(1-0)
 P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Principles and techniques of administering anesthetic agents. Supportive care including fluid therapy. Emergency procedures. Euthanasia agents.
- 572*. Cardiovascular System**
 Spring. 2(2-0)
 P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Pathogenesis, diagnosis, and management of cardiovascular diseases in animals. Anatomical, physiological, pathological and pharmacological principles providing the basis for medical and surgical treatment.
- 574*. Respiratory System**
 Fall. 3(3-0)
 P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Pathogenesis, diagnosis, and management of respiratory diseases of animals; anatomical, physiological and surgical treatments. Diagnostic and surgical procedures and radiologic interpretation.
- 576*. Digestive System I**
 Fall. 3(3-0)
 P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Pathogenesis, diagnosis, and treatment of diseases of the alimentary tract and digestive organs of small animals.
- 578*. Principles of Surgery I**
 Fall. 2(1-3)
 P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Fundamentals of surgery. Common procedures used in soft tissue surgery with small animals.
- 580*. Theriogenology**
 Spring. 4(3-3)
 P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Reproductive function and diseases of animals' genital structure and function and endocrine controls. Examination, diagnosis and treatment of the mammary gland and reproductive tract.
- 581*. Core of Medicine Laboratories III**
 Fall. 2(0-6)
 P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Diagnosis and treatment of diseases of the reproductive, digestive, and musculoskeletal systems.
- 582*. Musculoskeletal System I**
 Spring. 2(2-0)
 P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Diagnosis and treatment of musculoskeletal diseases of animals with emphasis on pathological changes, radiological techniques, and interpretation of radiographs.
- 586*. Digestive System II**
 Fall. 3(3-0)
 P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Pathogenesis, diagnosis and treatment of diseases of the alimentary tract and digestive organs of food animals and horses.
- 588*. Principles of Surgery II**
 Fall. 2(1-3)
 P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Fundamental large animal surgery, surgical techniques and management of animals before, during and after surgery.

VETERINARY MEDICINE

590*. **Client Communication and Jurisprudence**
 Spring. 1(1-0)
P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Communication and interviewing skills for effective client relations. Communication aspects of medical records and their use in medical problem solving, legal responsibilities of the veterinary medical profession.

591*. **Core of Medicine Laboratories IV**
 Spring. 1(0-3)
P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Diagnosis and treatment of common toxicologic conditions, musculoskeletal disorders and orthopedic conditions in animals.

592*. **Musculoskeletal System II**
 Spring. 3(3-0)
P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Diagnosis, prognosis and management of musculoskeletal diseases of large animals. Anatomical relationships of normal to abnormal function. Surgical procedures applicable to the equine and ruminant.

596*. **Diseases of Bones and Joints**
 Spring. 2(2-0)
P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Anatomy and pathophysiology of diseases of bones and joints. Diagnosis, prognosis and treatment of abnormalities involving bones and joints.

602*. **Veterinary Practice Management**
 Fall. 1(1-0)
P: Completion of Year 2 of the College of Veterinary Medicine. R: Year 3 College of Veterinary Medicine Veterinary Medicine none
 Establishment of a veterinary practice.

610*. **Veterinary Externship**
 Fall, Spring. 4(-)
P: Completion of Year 3 of the College of Veterinary Medicine. R: Year 4 College of Veterinary Medicine Veterinary Medicine none
 Clinical or research experience in an off-campus setting.

611*. **Veterinary Externship**
 Fall, Spring, Summer. 3(-) May reenroll for a maximum of 6 credits.
P: Completion of semesters 1-5 of the College of Veterinary Medicine. R: College of Veterinary Medicine Veterinary Medicine none
 Clinical or research experience in an off-campus setting.

620*. **Anesthesia Clerkship**
 Fall, Spring, Summer. 3(-) May reenroll for a maximum of 6 credits.
P: Completion of semesters 1-5 of the College of Veterinary Medicine. R: College of Veterinary Medicine Veterinary Medicine none
 Preanesthesia evaluation, induction, monitoring, and recovery of large and small animal patients requiring routine and major surgical procedures.

621*. **Diagnostic Imaging Clerkship**
 Fall, Spring, Summer. 3(-) May reenroll for a maximum of 6 credits.
P: Completion of semesters 1-5 of the College of Veterinary Medicine. R: College of Veterinary Medicine Veterinary Medicine none
 Diagnostic radiography and ultrasound imaging, including radiation safety and special procedures.

WOMEN'S STUDIES WS

201. **Introduction to Women's Studies**
 Fall, Spring. 4(4-0)
Interdepartmental with the Department(s) of Arts and Letters, Social Science.
 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.
 QA: WS 201

202*. **Introduction to Contemporary Feminist Theories**
 Fall. 3(3-0)
P: ATL 140 or ATL 145 or WS 201 R: Sophomores and above
 Contemporary U.S. feminist theories of patriarchy, oppression, liberation, sexuality, 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: ATL 140 or ATL 145 recommended
R: Sophomores and above
 Women's Studies bibliographic and reference sources. Library organization of multidisciplinary information. Women's Studies research problems.
 QP: WS 201 QA: WS 300

301*. **Sexual Violence Against Women and Children: Theory and Response**
 Spring. 3(3-0)
P: WS 201, or approval of Women's Studies Program R: Sophomores and above
 Sexual violence against women and children from a theoretical and applied perspective. Rape, battering, incest and sexual harassment. Intersections of race, class, gender and violence. Self-defense as individual response.
 QP: WS 201 QA: WS 300

302*. **Jewish Women's Experiences and Writings**
 Spring. 3(3-0)
P: WS 201 or approval of Women's Studies Program R: Sophomores and above
 Jewish women's writings. Gender construction of Jewish and majority women and men. Jewish cultural diversity. Generations of immigrant Jewish women. Anti-Semitism. Jewish feminism. Political and economic issues.
 QP: WS 201 QA: WS 300

401*. **Feminist Theory**
 Spring. 4(4-0)
P: WS 201, WS 202, WS 203; one 300 level WS course; or graduate standing <F9
R: Juniors or Seniors, Graduate students
 Integrative theoretical approaches to Women's Studies. Conceptualization of sex and gender and the subordination of women. Feminist critique of theories of knowledge. Comparison of evolving feminist theories.
 QP: 9 WS CRS QA: WS 402

402*. **Feminist Analyses of U.S. Education**
 Fall. 4(4-0) *Interdepartmental with the Department(s) of Teacher Education.*
P: WS 201; and either WS 202 or WS 203; or graduate standing R: Juniors and above
 Feminist perspectives on the gendered structuring of educational experience in elementary and secondary school.
 QP: WS 201 QA: WS 401

403*. **Women and Change in Developing Countries**
 Spring. 4(4-0)
P: WS 201; and either WS 202 or WS 203; or graduate standing R: Juniors and above
 Effects of economic, political, and social change on gender and class hierarchies and on production, reproduction, and on the role of women and women's groups in developing nations.
 QP: WS 201 QA: WS 401 SOC 490 ANP 490

404*. **Women and the U.S. Law**
 Spring. 4(4-0)
P: WS 201; and either WS 202 or WS 203; or graduate standing R: Juniors and above
 The law as a vehicle for structuring and maintaining women's social roles. The law as a vehicle for social change.
 QP: WS 201 QA: WS 300

490*. **Independent Study**
 Fall, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 8 credits.
P: WS 201; and either WS 202 or WS 203; or graduate standing R: Juniors or Seniors and approval of Women's Studies Program
 Individual reading and research on women and gender.
 QA: WS 409

491*. **Special Topics**
 Spring. 3 to 4 credits. May reenroll for a maximum of 8 credits.
P: WS 201; and either WS 202 or 203; or graduate standing R: Juniors and Seniors
 In-depth study of special topic emphasizing women and/or gender.
 QP: WS 201 QA: WS 300

492*. **Women's Studies Senior Seminar**
 Spring. 4(4-0)
P: WS 201, WS 203, one 300 level WS course; or graduate standing R: Juniors and above
 Seminar providing synthesis and elaboration of Women's Studies Thematic and major. Reflects interests and research of current feminist scholarship. Intensive examination of a feminist research area.
 QP: WS 201 QA: WS 401

493*. **Internship**
 Fall, Spring, Summer. 2 to 4 credits. May reenroll for a maximum of 4 credits.
P: WS 201; and either WS 202 or WS 203; or graduate standing R: Juniors and above
 Integration of feminist knowledge through work experience related to women's concerns. Legislative, community or educational settings provide hands-on experience to increase student's awareness and skills.
 QA: WS 305

890*. **Individual Reading**
 Fall, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 12 credits.
R: Approval of Women's Studies Program
 Women's Studies supervised graduate level reading in special topics.
 QA: WS 890