

Descriptions — Veterinary Medicine of Courses

- 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.

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(3-0) Interdepartmental with English. Administered by English.

P: ENG 353 or WS 202. R: Not open to freshmen and sophomores. Open only to students in English and Women's Studies, and to students in English teaching minor.

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; WS 202 or WS 203. R: Open only to juniors and seniors; approval of program.

Individual reading and research on women and gender.

491. Special Topics

Spring. 3 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. P: WS 201; WS 202 or 203. R: Not open to freshmen and sophomores.

In-depth study of special topic emphasizing women and gender.

492. Women's Studies Senior Seminar

Spring. 4(4-0) P: WS 201, WS 203; WS 301 or WS 302. R: Not open to freshmen and sophomores.

Synthesis and elaboration of ideas and perspectives central to Women's studies. Current areas of interest and research in feminist scholarship.

493. Internship

Fall, Spring, Summer. 2 to 4 credits. A student may earn a maximum of 4 credits in all enrollments for this course.

P: WS 201; WS 202 or WS 203. R: Not open to freshmen and sophomores. Approval of program.

Integration of feminist knowledge through work experience related to women's concerns. Experience in legislative, community, or educational settings.

890. Individual Reading

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 program. Faculty supervised graduate level reading in special topics.

ZOOLOGY

**Department of Zoology
College of Natural Science**

141. Introductory Human Genetics

Spring. 3(3-0)

R: Not open to students in Biochemistry, Botany, Entomology, Medical Technology, Clinical Laboratory Sciences, Physiology, Zoology, Microbiology or Interdepartmental Biological Science or to students in the corresponding Lyman Briggs School coordinate majors or to students in the Lyman Briggs School Biology Field of concentration. Not open to students with credit in ZOL 341 or ZOL 344.

Inheritance of human traits. Impact of genetic technology on society. Ethical and legal issues. Risks and benefits of genetic technology.

306. Invertebrate Biology

Fall. 4(3-3)

P: BS 110.

Systematics, morphology, and natural history of invertebrate animals. Identification of live and preserved specimens. Recognition of selected groups.

313. Animal Behavior

Fall. 3(3-0)

P: BS 110, BS 111 or LBS 144, LBS 145. R: Not open to freshmen.

Mechanisms and evolution of behavior (ethology).

SA: ZOL 213

316. General Parasitology

Spring. 2(2-0)

P: BS 110, BS 111 or LBS 145.

Identification, life history, host-parasite relationships, and epidemiology of protozoan, helminth, acanthocephalan, copepod, and arthropod parasites of animals and humans.

316L. General Parasitology Laboratory

Spring. 1(0-2)

P: BS 110, BS 111 or LBS 145. C: ZOL 316.

Laboratory diagnosis of protozoans, helminths, acanthocephalans, copepods, and arthropods that infect humans and animals. Animal necropsy.

320. Developmental Biology

Fall. 4(3-3)

P: BS 110, BS 111 or LBS 144, LBS 145.

Principles of development, emphasizing vertebrates. Illustrations from morphological and experimental investigations.

SA: ZOL 220

328. Comparative Anatomy and Biology of Vertebrates

Spring. 4(3-3)

P: BS 110 or LBS 144.

Comparative morphology and natural history of vertebrates. Dissection of representatives of most vertebrate classes.

SA: ZOL 228

331. Vertebrate Life of the Past

Spring. 3(3-0) Interdepartmental with Geological Sciences. Administered by Geological Sciences.

P: BS 110 or BS 111 or juniors and above. R: Not open Zoology majors. Not open to students with credit in GLG 433.

Evolution and diversity of fossil vertebrates from fish to humans with emphasis on dinosaurs and Pleistocene events.

ZOL

341. Fundamental Genetics

Fall, Spring, Summer. 4(4-0) Interdepartmental with Botany and Plant Pathology.

P: BS 110 or LBS 144.

Principles of heredity in animals, plants and microorganisms. Formal and molecular methods in the study of gene structure, transmission, expression and evolution.

342. Advanced Genetics

Spring. 3(3-0)

P: ZOL 341.

Advanced topics in classical and molecular genetics including various forms of genetic mapping.

343. Genetics Laboratory

Spring. 2(0-4)

P: ZOL 341 or concurrently.

Experiments involving genetics of *Drosophila* and other eucaryotic organisms.

344. Human Genetics

Spring. 3(3-0)

P: ZOL 341. R: Not open to freshmen.

Inheritance of human traits. Medical, physiological and forensic applications. Biochemical and molecular genetics of human disease. Chromosomal disorders and their consequences. Prenatal and pre-symptomatic diagnosis. Legal and ethnical considerations.

350. Histology

Fall. 4(3-3)

P: BS 111 or LBS 145.

The structure of cells and their interactions to form tissues.

353. Marine Biology

Fall of even-numbered years. 4(4-0)

P: BS 110; BOT 250 or ZOL 250 or ZOL 306.

Analysis of marine and estuarine systems. Integration of biology, chemistry, and physics. Life histories of marine organisms. Biology of special marine habitats. Physiological problems of marine life.

355. Ecology

Fall. 4(3-3) Summer. 4 credits. Given at W.K. Kellogg Biological Station. Interdepartmental with Botany and Plant Pathology.

P: BS 110 or LBS 144. R: Completion of Tier I writing requirement.

Plant and animal ecology. Interrelationships of plants and animals with the environment. Principles of population, community, and ecosystem ecology. Application of ecological principles to global sustainability.

SA: ZOL 250

360. Biology of Birds

Spring. 4(3-3) Summer. 4 credits. Given at W.K. Kellogg Biological Station.

P: BS 110 or LBS 144.

The behavior, ecology, evolution, and systematics of birds with emphasis on biodiversity. Laboratories emphasize diversity of form and function, life history patterns, and identification.

365. Biology of Mammals

Fall. 4(3-3)

P: BS 110 or LBS 144

Analysis of the behavior, ecology, evolution, and systematics of mammals. Laboratories emphasize diversity of form and function, life history patterns, and identification. Field trips required.

384. Biology of Amphibians and Reptiles

Fall of odd-numbered years. 3(2-3) Summer of even-numbered years. 3 credits. Given at W.K. Kellogg Biological Station.

P: ZOL 228.

Biology of amphibians and reptiles. Laboratory emphasis on diversity and on Michigan species. Field trips required.