

**Description — Theatre  
of  
Courses**

**437. Scene Painting**

Fall of odd-numbered years. 3(0-6)  
Majors or approval of department.

A "hands-on" course which introduces and explores the styles, techniques and materials necessary for painting scenery for the stage.

**475. Black African Theatre Forms**

Spring of even-numbered years. 3(3-0)  
Approval of department.

Overview of selected Caribbean and African playwrights. Examination of performance styles and historical situations that may affect the playwright.

**477. Development of Theatre I**

Fall of even-numbered years. 3(3-0)

Origins and evolution of Western physical theatre from 500 B.C. to 1850 A.D. with emphasis on theatre as a performance art and a social expression.

**478. Development of Theatre II**

Fall of odd-numbered years. 3(3-0)

Crisis and change in theatre forms since 1850 with emphasis on the emergence of the stage director and the influence of new technology.

**479. Black American Theatre**

Spring of odd-numbered years. 3(3-0)

Black American Theatre from its beginning in ritual theatre and oral tradition of Africa through its redevelopment in America.

**480. American Theatre History**

Spring of even-numbered years. 3(3-0)

Focus on major events and artists of the American Theatre from 1665 to the present.

**481. Direction and Design: Styles**

Spring of odd-numbered years. 3(0-6)  
THR 303.

Provide background in historic research skills and historic production techniques.

**483. Theatre Organization and Management**

Fall. 3(3-0)

Administration, organization and philosophy of theatre.

**489. Tour**

Spring. 3(0-6) May reenroll for a maximum of 6 credits. Approval of department.

Rehearsal for and participation in the various departmental touring productions.

**490. Theatres of India and Southeast Asia**

Winter of odd-numbered years. 3(3-0)

Origins and development of major theatre forms of India and Southeast Asia supplemented by significant plays illustrative of the courtly tradition, religious ritual and social revolution.

**491. Theatres of China and Japan**

Winter of even-numbered years. 3(3-0)

Origins and development of major theatre forms of China and Japan supplemented by key plays and their unique manner of presentation.

**493. History of Dance I**

Fall of even-numbered years. 3(3-0)  
Approval of department.

Historical overview of dance to 1900. Emphasis on various dance forms, artists and cultures.

**494. History of Dance II**

Winter of odd-numbered years. 3(3-0)  
Approval of department.

The history of dance from 1900 to the present. Focus on various dance forms, philosophies and personalities, including those of the American musical theatre.

**499A. Readings in Special Theatre Problems**

Fall, Winter, Spring, Summer. 2 to 4 credits. May reenroll for a maximum of 12 credits. Approval of department.

Independent study projects related to specific problems in theatre production of an advanced and/or experimental nature. Taught tutorially.

**499B. Design Tutorial**

Fall, Winter, Spring, Summer. 2 to 4 credits. May reenroll for a maximum of 12 credits. Approval of department.

Independent study projects related to specific problems in theatrical design of an advanced and/or experimental nature. Taught tutorially.

**499C. Directing Tutorial**

Fall, Winter, Spring, Summer. 2 to 4 credits. May reenroll for a maximum of 12 credits. Approval of department.

Independent study projects related to specific problems in direction of an advanced and/or experimental nature. Taught tutorially.

**499D. Children's Theatre Tutorial**

Fall, Winter, Spring, Summer. 3 to 6 credits. May reenroll for a maximum of 12 credits. THR 420, THR 421.

Independent study projects related to specific problems in children's theatre or creative dramatics.

**499E. Dance Tutorial**

Fall, Winter, Spring. 1 to 3 credits. May reenroll for a maximum of 12 credits. Approval of department.

Independent study projects related to specific problems in dance of an advanced and/or experimental nature.

**800. Theatre Methodology and Research**

Fall. 3(3-0)

Explores research techniques appropriate to theatre. Practical library projects strengthen skills necessary to digest and relate data meaningfully at all levels of theatre.

**801A. Dramatic Theory and Criticism: Greek to Neoclassic**

Fall. 3(4-0) Approval of department.

Dramatic criticism and theory from Aristotle to 1770. Emphasis on classic contributions.

**801B. Dramatic Theory and Criticism: 1800 to Present**

Winter. 3(4-0) Approval of department.

Dramatic criticism and theory from Romanticism to the present day.

**803A. Practicum in Theatre Arts: Acting**

Fall, Winter, Spring, Summer. 3(0-10)  
May reenroll for a maximum of 18 credits. Approval of department.

Graduate practicum in acting.

**804. Problems in Theatrical Design**

Fall, Winter, Spring, Summer. 4(4-0)  
May reenroll for a maximum of 20 credits. Approval of department.

Problems in theatre design—costumes, scenery, lighting, architecture, properties, sound.

**805. Studies in Comparative Theatre and Drama**

Fall, Winter, Spring, Summer. 3(3-0)  
May reenroll for a maximum of 12 credits. Approval of department. Interdepartmental with the Department of English.

Comparative study of selected playwrights, movements, trends and developments in world drama from the beginnings to the present day.

**806. Advanced Directing Practices**

Winter, Summer. 4(4-0) May reenroll for a maximum of 12 credits. Approval of department.

Directing theory and practice in the 20th century. Study and laboratory experimentation.

**808. Studies in Theatre History**

Fall, Winter, Spring, Summer. 3(3-0)  
May reenroll for a maximum of 18 credits. Approval of department.

Selected periods in Western and Asian Theatre History emphasizing the theatre as a cultural expression and a performing art.

**809. Acting Theory**

Fall. 2(2-0) Approval of instructor.

Discussion of the theories, processes, techniques, and styles of acting set forth in the writings of prominent performers, teachers, and critics.

**899. Master's Thesis Research**

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

**990. Special Problems—Theatre**

Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 15 credits.

Special problems in theatre research and experimentation with emphasis on the relation of theatre to other disciplines.

**999. Doctoral Dissertation Research**

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

**URBAN PLANNING**

See Geography.

**VETERINARY MEDICINE V M  
(COLLEGE OF)**

**512. Physical Examination and Animal Handling I**

Winter. 2(0-6) First year Veterinary Medicine students.

Techniques for restraint and examination of horses, poultry, dogs, cats, caged birds; inspections of production units.

**515. Introduction to Veterinary Practice and Animal Behavior**

Winter. 2(2-0) First year Veterinary Medicine students.

Animal behavior including patterns, inheritance, learning, communication, sleep patterns, social structure, physical examination, ingestive and eliminative; human-animal bonding; solving behavior problems; medical record development and establishing client relationships.

**Veterinary Medicine — Description  
of  
Courses**

- 517. Perspectives in Veterinary Medicine**  
Fall. 1(1-0) First-term Veterinary Medicine students.  
Ethical principles, historical background and organization of the veterinary profession.
- 521. Introduction to Veterinary Medicine II**  
Spring. 4(3-4) Third-term Veterinary Medicine students.  
Restraint, physical examination and diagnostic procedures in food animals and horses. Fundamentals of equine conformation, gaits, shoeing and routine medical care.  
Approved through Winter 1988.
- 540. Metabolic Diseases and Endocrinology**  
Winter. 2(2-0) Fifth-term Veterinary Medicine students.  
Biochemical and physiological basis of metabolic and endocrine diseases of animals including diagnosis, treatment and management.
- 542. Principles of Radiology**  
Fall. 2(2-0) Fourth-term Veterinary Medicine students.  
Fundamentals of veterinary radiography. Normal radiographic anatomy. Principles of radiographic interpretation. Radiation safety.
- 544. Veterinary Epidemiology**  
Fall. 4(4-0) Fourth-term Veterinary Medicine students.  
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 investigative epidemiology.
- 550. Preventive Veterinary Medicine and Public Health**  
Spring. 4(4-0) Sixth-term veterinary medicine students.  
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.
- 560. Urinary System**  
Spring. 3(3-0) Sixth-term Veterinary Medicine students.  
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. 2(0-6) Sixth-term Veterinary Medicine students.  
Classification diagnosis and treatment of diseases of the urinary, hematopoietic, nervous, integumentary and visual systems of animals.
- 562. Hematopoietic System**  
Spring. 2(2-0) Sixth-term Veterinary Medicine students.  
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. 2(2-0) Sixth-term Veterinary Medicine students.  
Methods of examination, diagnosis, and treatment of ocular diseases.
- 564. Survey of Infectious Agents**  
Winter. 3(3-0) Fifth-term veterinary medicine students.  
Host-microorganism relationship in diseases of animals; laboratory diagnosis, treatment, control, and public health significance.
- 566. Nervous System**  
Spring. 3(3-0) Sixth-term Veterinary Medicine students.  
Normal and abnormal neural structure and function in animals with emphasis on clinical neurology and neuropathology.
- 568. Integumentary System**  
Spring. 3(3-0) Sixth-term Veterinary Medicine students.  
Diseases of the integumentary system of animals with emphasis on laboratory examinations, interpretations of pathological features, diagnosis and treatment.
- 570. Principles of Anesthesia**  
Fall. 2(2-0) Seventh-term Veterinary Medicine students.  
Principles and techniques of administering anesthetic agents. Supportive care including fluid therapy. Emergency procedures. Euthanasia agents.
- 571. Core of Medicine Laboratories II**  
Fall. 1(0-3) Seventh-term Veterinary Medicine students.  
Classification, diagnosis and treatment of diseases of the cardiovascular, respiratory and digestive systems of animals. Preanesthetic and anesthetic procedures and skills.
- 572. Cardiovascular System**  
Fall. 3(3-0) Seventh-term Veterinary Medicine students.  
Pathogenesis, diagnosis, and management of cardiovascular diseases of animals. Anatomical, physiological, pathological and pharmacological principles providing basis for medical and surgical treatment. Diagnostic and surgical procedures and radiologic interpretation.
- 574. Respiratory System**  
Winter. 4(4-0) Eighth-term Veterinary Medicine students.  
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. 4(4-0) Seventh-term Veterinary Medicine students.  
Pathogenesis, diagnosis, and treatment of diseases of the alimentary tract and digestive organs of small animals.
- 578. Principles of Surgery I**  
Fall. 3(2-3) Seventh-term Veterinary Medicine students.  
Fundamentals of surgery. Common procedures used in soft tissue surgery with small animals.
- 580. Theriogenology**  
Fall. 6(5-3) Seventh-term Veterinary Medicine students.  
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**  
Winter. 3(0-9) Eighth-term Veterinary Medicine students.  
Diagnosis and treatment of diseases of the reproductive, digestive and musculoskeletal systems.
- 582. Musculoskeletal System I**  
Winter. 3(3-0) Eighth-term Veterinary Medicine students.  
Diagnosis and treatment of musculoskeletal diseases of animals with emphasis on pathological changes, radiological techniques, and interpretation of radiographs.
- 586. Digestive System II**  
Winter. 4(4-0) Eighth-term Veterinary Medicine students.  
Pathogenesis, diagnosis and treatment of diseases of the alimentary tract and digestive organs of food animals and horses.
- 588. Principles of Surgery II**  
Winter. 3(2-3) Eighth-term Veterinary Medicine students.  
Fundamental large animal surgery. Surgical techniques and management of animals before, during and after surgery.
- 590. Client Communication and Jurisprudence**  
Spring. 2(2-0) Ninth-term Veterinary Medicine students.  
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. 2(0-6) Ninth-term Veterinary Medicine students.  
Diagnosis and treatment of common toxicologic conditions, musculoskeletal disorders and orthopedic conditions in animals.
- 592. Musculoskeletal System II**  
Spring. 4(4-0) Eighth-term Veterinary Medicine students.  
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. Radiographic diagnosis and interpretation of various lameness conditions.
- 594. Veterinary Toxicology**  
Spring. 4(4-0) Ninth-term Veterinary Medicine students.  
Pharmacological basis and pathological features of diseases of animals caused by common toxic chemicals with emphasis on clinical manifestations, diagnosis, prevention, and treatment.
- 596. Diseases of Bones and Joints**  
Spring. 3(3-0) Ninth-term Veterinary Medicine students.  
Anatomy and pathophysiology of diseases of bones and joints. Diagnosis, prognosis and treatment of abnormalities involving bones and joints.
- 602. Veterinary Practice Management**  
Spring. 2(2-0) Ninth-term Veterinary Medicine students, approval of college.  
Establishment of a veterinary practice.

**Description — Veterinary Medicine  
of  
Courses**

**610. Veterinary Externship**  
Fall, Winter, Spring, Summer. 6 to 12 credits. May reenroll for a maximum of 12 credits. Veterinary Medicine students; completion of preclinical courses and approval of college. Students may not receive credit in both VM 610 and LCS 674.  
Clinical or research experience in an off-campus setting.

**WOMEN'S STUDIES  
PROGRAM**

**W S**

**College of Arts and Letters  
College of Social Science**

**201. Introduction to Women's Studies: Women's Consciousness**  
(IDC 233.) Winter, Spring. 4(4-0)  
Interdepartmental with the colleges of Arts and Letters and Social Science.

Development of women's consciousness in various historical, cross-cultural and scientific contexts. Contexts basic to feminist thought are clarified. Critique of sexism in traditional scholarship.

**300. Special Topics in Women's Studies**  
Spring of even-numbered years. 3(3-0) or 4(4-0) May reenroll for a maximum of 8 credits if different topic is taken. Sophomores, W S 201 or approval of instructor. Interdepartmental with the colleges of Arts and Letters and Social Science.

Special topic emphasizing women and/or gender.

**305. Women's Studies Internship**  
Fall, Winter, Spring, Summer. 2 to 4 credits. May reenroll for a maximum of 4 credits. Six credits of women's studies courses, approval of Women's Studies Program. Interdepartmental with the colleges of Arts and Letters and Social Science.

Integration of feminist knowledge through work experience in legislative, community or educational settings.

**401. Women's Studies Senior Level Seminar**  
Spring. 4(4-0) Juniors; W S 201 or six credits of ATL 181, ATL 182, ATL 183. Interdepartmental with the colleges of Arts and Letters and Social Science.

Synthesis of course work in women's studies. Emphasis is on individualized research projects.

**402. Feminist Theory**  
Fall. 4(4-0) Nine credits in women's studies courses, approval of instructor. Interdepartmental with the colleges of Arts and Letters and Social Science.

Integrative theoretical approaches to women's studies; ways of conceptualizing sex and gender; varieties of explanation of sexual inequality; feminist critiques of traditional knowledge.

**409. Independent Study in Women's Studies**  
Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 8 credits. Juniors, approval of Women's Studies Program. Interdepartmental with the colleges of Arts and Letters and Social Science.

Individual reading and research on women and gender.

**425. Women and Religion: Feminist Critiques Since 1970**  
Winter. 3(3-0) Juniors or approval of department. Interdepartmental with and administered by the Department of Religious Studies.

Writings and thought of contemporary Jewish and Christian feminist theologians; views on scripture, God-language, patriarchy, ministry, spirituality, ethics. Scriptural reinterpretations; overview of women's role and place in world religions.

**313. Animal Behavior**  
Spring; 4(4-0). Given at W. K. Kellogg Biological Station Summer term of odd-numbered years: 4 credits. B S 211.

Description of the known behavior of the various vertebrate and invertebrate phyla with emphasis upon adaptive significance. Thus, special attention will be given to mating, defensive, and nutritive behavior. The genetics and ontogeny of behavioral patterns will be presented where known. Behavior will be related to the ecology of various animal populations.

**317. Principles of Development**  
Fall, Spring, Summer. 3(3-0) B S 211.

Development of animals, especially vertebrates. Principles are illustrated by modern experimental studies of developmental problems.

**318. Principles of Development Laboratory**  
Fall, Spring. 2(0-6) ZOL 317 or concurrently; B S 212.

Principles of development illustrated by analysis of the ontogeny of selected organisms.

**337. The Fossil Record of Organic Evolution**  
Spring. 3(3-0) One course in a natural science; Juniors. Interdepartmental with and administered by Geology.

The direct evidence for organic evolution in the fossil record. Evolution of life from prebiological systems to humans. Impact of fossil discoveries on human thought.

**341. Human Heredity**  
Fall, Winter. 4(4-0) Sophomores. Not open to zoology majors. Students may not receive credit in more than one of the following: ZOL 341, ZOL 441.

Inheritance of human physiological, and psychological traits. Forces that influence human evolution. Applications of heredity in fields of education, sociology, anthropology, psychology, dentistry, and medicine.

**389. Animal Ecology**  
Winter, Summer. Given at W. K. Kellogg Biological Station Summer term. Winter: 4(3-4) Summer: 4 credits. B S 212 or concurrently.

Animals in relation to their environment. Factors affecting the distribution and abundance of animals. Interrelationships between climate, soils, vegetation, geologic history and animal life. Population characteristics as related to reproduction and mortality factors.

**391. Zoological Problems**  
Fall, Winter, Spring, Summer. 1 to 8 credits. May reenroll for a maximum of 12 credits. Juniors; B S 212; 6 credits in zoology; approval of department.

Advanced work in morphology, field zoology, genetics, mammalogy, ornithology, or ichthyology.

**400H. Honors Work**  
Fall, Winter, Spring. 1 to 5 credits. May reenroll for a maximum of 15 credits. Juniors; approval of department.

**ZOOLOGY**

**ZOL**

**College of Human Medicine  
College of Natural Science**

**203. Resource Ecology**  
(IDC 200.) Fall, Winter, Spring, Summer. 3(3-0) Interdepartmental with the departments of Fisheries and Wildlife, Forestry, Geography, and Resource Development. Administered by the Department of Fisheries and Wildlife.

Basic concepts of ecology which are the unifying basis for resource management, conservation policy and the analysis of environmental quality. Extensive use of guest lecturers.

**301. Nature and Homo Sapiens**  
Spring. 4(4-0) Three terms of natural science; not open to zoology majors.

A case study approach which explores the interaction of technical, social, economic and legal influences on the management of contemporary environmental issues in Michigan.

**302. Vertebrate Life of the Past**  
Fall. 3(3-0) One course in physical or biological science or Juniors. Interdepartmental with and administered by Geology.

Fossil vertebrates from fish to humans.

**304. Biology, Behavior and Humans**  
Winter. 3(3-0) Juniors; not open to zoology majors.

Examines philosophical and biological issues which make the study of animal behavior relevant to humans. Emphasizes history of animal behavior, current theories, and experiments relating biological and environmental determinants of adaptive and non-adaptive behavior patterns.

**306. Invertebrate Biology**  
Fall. 4(3-3) B S 212.

Systematics, morphology, and natural history of invertebrate animals. Laboratory includes identification of live and preserved animals and recognition of morphological characteristics of selected groups.

**307. Vertebrate Biology**  
Winter, Summer. Given at W. K. Kellogg Biological Station Summer term. Winter: 4(3-3) Summer: 4 credits. B S 212.

Systematics, morphology and natural history of vertebrate animals. Laboratory includes identification of live and preserved animals and recognition of morphological characteristics of selected groups.