

PARK AND RECREATION RESOURCES

475*. **Evaluation in Parks and Recreation**
 Fall. 3(3-0)
 P: PRR 370 and STT 200 or STT 201 or PSY 295 or GEO 427. R: Seniors and above.
 Evaluation concepts, approaches and types. Utilization of evaluative processes in management and administrative functions. Application of evaluative research methods and data collection techniques. Analysis, interpretation, and presentation of data.
 QP: PRR 215 PSY 215GEO 427 QA: PRR 430

485*. **Legal Aspects of Parks, Recreation, and Sport**
 Fall. 3(3-0)
 P: PRR 441. R: Open only to seniors and graduate students.
 Legal concepts in management and operation of public and private programs, areas and facilities. Tort liability and risk management planning. Rights and behavior constraints of clientele. Legal foundations of authority.
 QP: PRR 440 QA: NEW

490*. **Independent Study**
 Fall, Spring, Summer. 1(4-1) May reenroll for a maximum of 6 credits.
 P: PRR 215, PRR 320. R: Not open to freshmen and sophomores. Approval of department; application required.
 Individualized readings and research compatible with students' interests and abilities under the guidance of a faculty member.
 QP: PRR 215 PRR 320 QA: PRR 480

491*. **Special Topics in Park and Recreation Resources**
 Fall, Spring. 1 to 4 credits. May reenroll for a maximum of 6 credits.
 P: PRR 215; PRR 320 R: Juniors and above.
 Group studies for advanced undergraduate students having special interests in Park and Recreation Resources.
 QP: PRR 215 PRR 320

815*. **Park and Recreation Program Services**
 Fall. 3(3-0)
 R: Graduate
 Concepts, theories, philosophies of leisure and recreation. Role and function of delivery systems in communities. Management of the program planning process and provision of recreation services to diverse groups.

840*. **Recreation and Tourism Economics**
 Fall. 3(3-0)
 R: Graduate
 Uses of economic concepts in making public and private sector recreation and tourism decisions. Non-market valuation techniques, regional economic impact, demand, supply, forecasting consumption trends, economics of finance and benefit cost analysis.
 QA: PRR 840

841*. **Park and Recreation Administration and Policy**
 Fall. 3(3-0)
 R: Graduate Students
 Administration and management of park and recreation services for communities in changing urban and rural environments. Policy development and evaluation. Planning, financing, staffing, operating and evaluating organizational structures.
 QA: PRR 871

844*. **Nature Of Inquiry In Recreation, Parks and Tourism**
 Spring. 3(3-0)
 R: Graduate Standing
 Comparative review of recreation research methods and techniques. Assessment of application of research to recreation management problems and decision making.
 QA: PRR 844

848*. **The Law and Leisure Services**
 Spring. 3(3-0)
 R: Graduate Standing
 Risk control. Legal audits. Human rights mandates. Legal information systems. Contracts and participant forms. Intentional tort and negligence concepts. Personnel legal processes.
 QA: PRR 848

870*. **Marketing Park, Recreation and Natural Resources**
 Fall of odd-numbered years. 3(3-0)
 R: Graduate
 Marketing concepts as applied to parks, recreation and natural resource organizations. Emphasis on strategic rather than tactical marketing. Illustrations of how marketing concepts and methods can influence and facilitate organizations.
 QA: 871

874*. **Leisure, Travel and Tourism**
 Spring. 3(3-0)
 R: Graduate Standing
 Principles and concepts of travel and tourism, drawing upon disciplinary research and current studies on recreation, tourism and leisure. Focus on integration of leisure, recreation and tourism, particularly resource based tourism behavior.
 QA: PRR 871

879*. **Integrated Approach to Current Park and Recreation Problems**
 Spring. 3(3-0)
 P: PRR 840, PRR 841 R: Graduate
 An integrated multi-disciplinary case study approach to current park and recreation related policy, planning, and management problems.

890*. **Selected Topics**
 Fall, Spring, Summer. 1(6-1) May reenroll for a maximum of 9 credits.

Selected topics in recreation, parks, leisure and tourism. Planning, administrative problems, resource management, recreation and tourism policy, aging and leisure.

891*. **Special Problems**
 Fall, Spring, Summer. 1(6-1) May reenroll for a maximum of 9 credits.
 R: Graduates
 Independent study in parks, recreation, leisure, and tourism topics and problems

892*. **Park and Recreation Resources Seminar**
 Fall, Spring. 1(6-1) May reenroll for a maximum of 2 credits.
 R: Graduates
 Current policy issues, problems and research in Parks, Recreation and Tourism.

899*. **Master's Thesis Research**
 Fall, Spring, Summer. 1(6-1) May reenroll for a maximum of 8 credits.
 R: Graduate M.S. Students in Thesis Program

944*. **Advanced Research Methods**
 Fall. 3(3-0)
 P: One statistics course, one research methods course. R: Graduate
 Applications of advanced and specialized research methods to problems in recreation and tourism research. Current measurement, sampling, design, and statistical problems in leisure research.

999*. **Doctoral Dissertation Research**
 Fall, Spring, Summer. 1(24-1) May reenroll for a maximum of 24 credits.
 R: Graduate PRR, Ph.D. Level Students

PATHOLOGY

PTH

542. **Basic Principles of Pathology**
 Spring. 2(-)
 R: Graduate-professional students in colleges of Human and Osteopathic Medicine.
 Fundamental pathologic processes; clinical applications.

550*. **Veterinary Pathology**
 Fall. 4(3-3)
 P: Completion of Year 1 of the College of Veterinary Medicine. R: Year 2 College of Veterinary Medicine Veterinary Medicine none
 Principles of pathology, including causes of disease, disturbances of cell growth and metabolism, necrosis, circulatory changes, inflammation and neoplasia.

551*. **General Pathology**
 Spring. 3(2-2)
 P: Admission to the College of Veterinary Medicine R: College of Veterinary Medicine Veterinary Medicine none
 Principles of general pathology and host responses to injury, including cell degeneration, necrosis, disturbances of growth and development, neoplasia, circulatory disturbances and inflammation.

552*. **Veterinary Clinical Pathology**
 Fall. 3(2-3)
 P: Completion of Year 1 of the College of Veterinary Medicine. R: Year 2 College of Veterinary Medicine Veterinary Medicine none
 Technical aspects, principles and interpretation of selected laboratory procedures in hematology, chemistry, cytology and related areas.

553*. **Clinical and Systemic Pathology**
 Fall. 5(4-2)
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine Veterinary Medicine none
 Clinical and anatomic pathology of the various body systems; hematology, pathology of hematopoietic, lymphatic, digestive, urinary, respiratory, integumentary, cardiovascular, nervous, reproductive, musculoskeletal, endocrine, ocular and otic systems.

592*. **Poultry Pathology Clerkship**
 Spring. 2(-)
 P: Completion of Year 3 of the College of Veterinary Medicine R: Year 4 College of Veterinary Medicine Veterinary Medicine none
 Each student will work under the direction of a faculty member on an experimental, theoretical or applied problem.

621*. **Histopathology Clerkship**
 Fall. 2(-)
 P: Completion of Year 3 of the College of Veterinary Medicine. R: Year 4 College of Veterinary Medicine Veterinary Medicine none
 Supervised instruction in the examination and interpretation of histologic lesions caused by animal diseases.

630*. **Diagnostic Pathology 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
 Necropsy, surgical pathology and clinical pathology with emphasis on interpretation of gross findings and laboratory data.

651*. **Veterinary Clinical Pathology Clerkship**
 Fall, , Summer. 3(-)
 P: Completion of Year 3 of the College of Veterinary Medicine. R: Year 4 College of Veterinary Medicine Veterinary Medicine none
 Concepts in laboratory interpretation and diagnosis.

PATHOLOGY

652*. Veterinary Necropsy Clerkship
 Fall, Spring, Summer. 2(-)
 P: Completion of Year 3 of the College of Veterinary Medicine. R: Year 4 College of Veterinary Medicine Veterinary Medicine none
 Supervised necropsy and interpretation of findings.

656*. Problems in Veterinary Necropsy Clerkship
 Spring. 2(-)
 P: Completion of Year 3 of The College of Veterinary Medicine. R: Year 4 College of Veterinary Medicine Veterinary Medicine none
 Problems related to necropsy and the interpretation of findings.

851*. Advanced General Pathology
 Fall. 3(3-0)
 P: Approval of Department
 Fundamental concepts of cell injury, inflammation, and oncogenesis; emphasis on mechanisms of disease

852*. Advanced General Pathology Laboratory
 Fall. 1(00-02)
 Histopathologic and ultrastructural study of general morphologic patterns of inflammation cell injury and neoplasm.

853*. Advanced Systemic Pathology
 Spring. 4(3-2)
 P: Approval of department
 Pathological aspects of the nervous, endocrine, cardiovascular, respiratory, urinary, genital, musculoskeletal, integumentary and special sense systems.

854*. Advanced Clinical Pathology
 Spring of odd-numbered years.
 3(03-00)
 P: Proir courses in hematology and clinical chemistry. Dept approval
 Veterinary hematology including anemias leukocyte responses and hemostasis. Clinical chemistry including tests to evaluate various organs.

855*. Proseminar
 Summer of odd-numbered years.
 2(02-00)
 P: Approval of Department
 Instruction in preparation, editing and review of research manuscripts and grants. Reproduction, presentation and critiquing of oral presentations. Thesis preparation. Illustrations of research data. Philosophy and methods of research.

856*. Pathotoxicology
 Summer of even-numbered years.
 3(03-00)
 P: One graduate level course in pathology or approval of instructor
 Pathologic changes in tissues of animals used in toxicologic studies. Clinical pathologic assessments. Gross, histologic and ultrastructural changes in organ systems.

857*. Correlative Diagnostic Pathology
 Fall, Spring, Summer. 3(00-06) May reenroll for a maximum of 6 credits.
 P: Approval of Department
 Diagnosis of animal diseases by necropsy, biopsy or clinical pathology; Emphasis on correlation of findings with history, laboratory data and morphologic findings; compiled and formal presentation of findings.

890*. Problems in Veterinary Pathology
 Fall, Spring, Summer. 1 to 12 credits.
 May reenroll for a maximum of 12 credits.
 P: Approval of Department
 Each student will work under the direction of a faculty member on an experimental, theoretical or applied problem in veterinary pathology

891*. Problems in Pathology
 Fall, Spring, Summer. 1 to 12 credits.
 May reenroll for a maximum of 12 credits.
 P: Approval of Department
 Each student will work under the direction of a faculty member on an experimental, theoretical or applied problem in pathology

892*. Pathology Seminar
 Fall, Spring. 1(01-00) May reenroll for a maximum of 3 credits.
 P: Approval of department
 Presentation and discussions by departmental graduate students, faculty or outside speakers on current topics in pathology

899*. Master's Thesis Research
 Fall, Spring, Summer. 1 to 10 credits.
 May reenroll for a maximum of 10 credits.
 P: Approval of Department
 Individual work on research problems for the masters degree in pathology

999*. Doctoral Dissertation Research
 Fall, Spring, Summer. 1 to 12 credits.
 May reenroll for a maximum of 99 credits.
 P: Admission to Doctoral Program in Pathology
 Individual research directed towards a dissertation for the doctoral degree in pathology.

PEDIATRICS AND HUMAN DEVELOPMENT PHD

523. Genetics for Medical Practice
 Summer. 1(1-0) Interdepartmental with the Department(s) of Biochemistry.
 R: Graduate-professional students in colleges of Human and Osteopathic Medicine.
 Basic principles of genetics for medical students.

524. Genetics Clinic
 Fall, Spring, Summer. 1 to 4 credits.
 May reenroll for a maximum of 8 credits.
 P: PHD 523 R: Graduate-professional students in colleges of Human and Osteopathic Medicine.
 Role of genetics in health care delivery under the direction of a faculty member.

591. Special Problems in Human Development
 Fall, Spring, Summer. 1 to 6 credits.
 May reenroll for a maximum of 12 credits.
 R: Graduate-professional students in colleges of Human and Osteopathic Medicine.
 Work under the direction of a faculty member on an experimental, theoretical, or applied problem.

600*. Pediatric Specialty Clerkship
 P: Completion of preclinical CHM curriculum. R: Open only to graduate-professional students in College of Human Medicine.
 Multidisciplinary approach to children and their families in a health care setting. Integrated biological, behavioral, and clinical sciences in assessing and planning children's health care needs.
 QA: PHD 600

601*. Human Development and Pediatric Sub-specialties(MTC)
 Fall, Spring, Summer. 6 to 12 credits in increments of 6 credits. May reenroll for a maximum of 12 credits.
 Interdisciplinary with the Department(s) of .
 P: PHD 600 R: Grad Professional Students in College of Human Medicine
 Elective experience in selected clinical, behavioral, and basic sciences related to pediatrics and human development

602*. Ambulatory Pediatrics
 Fall, Spring, Summer. 6 to 12 credits in increments of 6 credits. May reenroll for a maximum of 12 credits.
 P: PHD 600. R: Open only to graduate-professional students in College of Human Medicine.
 Clinical experience in outpatient and community setting involving ongoing child health care.
 QA: PHD 600

603*. Pediatric Infectious Diseases Clerkship
 Fall, Spring, Summer. 6 to 12 credits in increments of 6 credits. May reenroll for a maximum of 12 credits.
 P: PHD 600. R: Open only to graduate-professional students in College of Human Medicine.
 Combines office, clinic, and inpatient experiences in evaluation and managing pediatric patients with infectious diseases.
 QA: PHD 611

604*. Neonatology
 Fall, Spring, Summer. 6 to 12 credits in increments of 6 credits. May reenroll for a maximum of 12 credits.
 P: PHD 600 R: Grad Professional Students in College of Human Medicine
 Clinical experiences involving modern neonatal techniques and care patterns for the neonate including follow up

605*. Pediatric Cardiology Clerkship
 Fall, Spring, Summer. 6 to 12 credits in increments of 6 credits. May reenroll for a maximum of 12 credits.
 P: PHD 600. R: Open only to graduate-professional students in College of Human Medicine.
 Office, clinic, and hospital experience in diagnostic and therapeutic pediatric cardiology including special diagnostic procedures.

606*. Pediatric Endocrinology and Metabolism Clerkship
 Fall, Spring, Summer. 6 to 12 credits in increments of 6 credits. May reenroll for a maximum of 12 credits.
 P: PHD 600. R: Open only to graduate-professional students in College of Human Medicine.
 Clinic and hospital experience in evaluating patients with endocrine and metabolic disorders.

607*. Pediatric Hematology and Oncology Clerkship
 Fall, Spring, Summer. 6 to 12 credits in increments of 6 credits. May reenroll for a maximum of 12 credits.
 P: PHD 600. R: Open only to graduate-professional students in College of Human Medicine.
 Clinical experience in evaluating and managing pediatric patients with common hematologic and oncologic disorders.