870. Park, Recreation and Natural Resources Marketing
Fall of odd-numbered years. 3(3-0)
R: Open only to graduate students in Park and Recreation Resources, Resource Development, Forestry, and Fisheries and Wildlife.
Integration of marketing concepts and methods into agency planning and decision making.
QA: PRR 872

874. Leisure, Travel and Tourism
Spring. 3(3-0)
Modern concepts of leisure, travel, and tourism. Historical antecedents and current concepts of leisure, travel, and tourism.
QA: PRR 874

879. Case Studies in Park and Recreation Resources
Spring. 3(3-0)
P: PRR 844
Integrated approach to policy, planning, and management problems.

890. Independent Study
Fall, Spring, Summer. 1 to 6 credits.
A student may earn a maximum of 7 credits in all enrollments for this course.
Supervised individual study in an area of parks, recreation, leisure, or tourism.

891. Selected Topics
Fall, Spring, Summer. 3 to 6 credits.
A student may earn a maximum of 8 credits in all enrollments for this course.
Selected topics in park and recreation resources of current interest and importance.

892. Park and Recreation Resources Seminar
Fall, Spring. 1 to 2 credits.
A student may earn a maximum of 2 credits in all enrollments for this course.
Current policy issues, problems and research in parks, recreation and tourism.

899. Master's Thesis Research
Fall, Spring, Summer. 1 to 6 credits.
A student may earn a maximum of 99 credits in all enrollments for this course.
R: Open only to graduate students in Park and Recreation Resources. Approval of department.

944. Advanced Research Methods
Summer. 3(0-0)
P: PRR 844
Applications of advanced and specialized research methods to problems in recreation and tourism. Measurement, sampling, and research design.

990. Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits.
A student may earn a maximum of 99 credits in all enrollments for this course.
R: Open only to Ph.D. students in Park and Recreation Resources.

PATHOLOGY

Department of Pathology
College of Human Medicine
College of Osteopathic Medicine
College of Veterinary Medicine

525. Neuropathology Problem Solving Exercises
Fall, Spring, Summer. 2(0-4)
R: Open only to graduate-professional students in College of Human Medicine or Osteopathic Medicine. Independent study of 24 neuropathology problem solving exercises.
QA: PTH 625

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

550. Veterinary Pathology
Fall, 4(3-2)
R: Completion of the first year of the graduate-professional program in College of Veterinary Medicine. Not open to students with credit in PTH 551.
Histology of disease. Disturbances of cell growth and metabolism, necrosis, circulatory changes, inflammation, and neoplasia.
Temporary approval effective from Fall Semester 1992 through Spring Semester 1993.
QA: PTH 550

551. General Pathology
Spring. 3(2-2)
R: Completion of 1 semester of the graduate-professional program in the College of Veterinary Medicine. Not open to students with credit in PTH 550.
Histology of disease. Disturbances of cell growth and metabolism, necrosis, circulatory changes, inflammation, and neoplasia.
Temporary approval effective from Fall Semester 1992 through Spring Semester 1993.
QA: PTH 551

552. Veterinary Clinical Pathology
Fall. 3(2-2)
R: Completion of the first year of the graduate-professional program in College of Veterinary Medicine. Not open to students with credit in PTH 553.
Hematology. Pathology of hematopoietic, lymphatic, digestive, urinary, respiratory, integumentary, cardiovascular, nervous, reproductive, musculoskeletal, endocrine, ocular, and otic systems.

553. Clinical and Systemic Pathology
Fall. 3(2-2)
R: Completion of 2 semesters of the graduate-professional program in the College of Veterinary Medicine.
Not open to students with credit in PTH 552.
Not open to students with credit in PTH 553.
Hematology. Pathology of hematopoietic, lymphatic, digestive, urinary, respiratory, integumentary, cardiovascular, nervous, reproductive, musculoskeletal, endocrine, ocular, and otic systems.

590. Special Problems in Pathology
Fall, Spring, Summer. 1 to 6 credits.
A student may earn a maximum of 8 credits in all enrollments for this course.
R: Open only to graduate-professional students in College of Human Medicine.
Individual directed work on an experimental, theoretical, or applied problem in pathology.
QA: PTH 590

592. Special Problems in Veterinary Pathology
Fall, Spring, Summer. 1 to 4 credits.
A student may earn a maximum of 6 credits in all enrollments for this course.
R: Open only to graduate-professional students in College of Veterinary Medicine.
Not open to students with credit in PTH 632.
Student works under faculty direction on an experimental, theoretical or applied problem.
Temporary approval effective from Fall Semester 1992 through Spring Semester 1996.
QA: PTH 630

608. Pathology Clerkship
Fall, Spring. 1 to 8 credits.
A student may earn a maximum of 12 credits in all enrollments for this course.
R: Open only to graduate-professional students in College of Human Medicine or Osteopathic Medicine.
Anatomic and clinical pathology with emphasis on clinical-pathological correlation. Conducted in pathology departments of affiliated hospitals.
QA: PTH 608

609. Laboratory Medicine Clerkship
Fall, Spring. 1 to 4 credits.
A student may earn a maximum of 8 credits in all enrollments for this course.
R: Open only to graduate-professional students in College of Human Medicine or Osteopathic Medicine.
Laboratory procedures. Correlation of laboratory data with morphologic abnormalities in patients with altered physiologic states.
QA: PTH 609

631. Histopathology Clerkship
Fall, Spring. 2 credits.
R: Completion of the third year of the graduate-professional program in College of Veterinary Medicine.
Supervised instruction in the examination and interpretation of histologic lesions caused by animal disease.
Temporary approval effective from Fall Semester 1992 through Spring Semester 1996.
QA: PTH 631

632. Necropsy Clerkship
Fall, Spring. 3 credits.
R: Completion of 5 semesters of the graduate-professional program in College of Veterinary Medicine.
Temporary approval effective from Fall Semester 1992 through Spring Semester 1996.
QA: PTH 632

633. Problems in Veterinary Pathology
Fall, Spring. 3 credits.
R: Completion of 5 semesters of the graduate-professional program in College of Veterinary Medicine.
Supervised necropsy. Interpretation and presentation of findings.

635. Clinical and Systemic Pathology Clerkship
Fall, Spring. 1 to 3 credits.
R: Completion of the third year of the graduate-professional program in the College of Veterinary Medicine.
Not open to students with credit in PTH 630.
Concepts in laboratory interpretation and diagnosis.
Temporary approval effective from Fall Semester 1992 through Spring Semester 1996.
QA: PTH 631

652. Veterinary Necropsy Clerkship
Fall, Spring. 3 credits.
R: Completion of the third year of the graduate-professional program in the College of Veterinary Medicine.
Temporary approval effective from Fall Semester 1992 through Spring Semester 1996.
QA: PTH 652

656. Problems in Veterinary Necropsy Clerkship
Fall, Spring. 2 credits.
R: Completion of the third year of the graduate-professional program in the College of Veterinary Medicine.
Not open to students with credit in PTH 631.
Problems in necropsy and interpretation of findings.
Temporary approval effective from Fall Semester 1992 through Spring Semester 1996.
QA: PTH 656
851. Advanced General Pathology
Fall of even-numbered years. 3(3-0)
P: PTH 850 concurrently. R: Approval of department.
Fundamental concepts of cell injury, inflammation, and oncogenesis. Mechanisms of disease.
QA: PTH 806

852. Advanced General Pathology Laboratory
Fall of even-numbered years. 1(0-2)
P: PTH 851 concurrently.
Histopathologic and ultrastructural study of general morphologic patterns of inflammation cell injury and neoplasms.
QA: PTH 806L

853. Advanced Systemic Pathology
Spring of even-numbered years. 4(3-2)
R: Approval of department.
Pathological aspects of the nervous, endocrine, cardiovascular, respiratory, urinary, genital, musculoskeletal, integumentary and special sense systems.
QA: PTH 802, PTH 803, PTH 807

854. Advanced Clinical Pathology
Spring of odd-numbered years. 3(3-0)
P: PTH 540, PTH 552, PTH 609, PTH 651. R: Approval of department.
Preparation, editing, and review of research manuscripts and grants. Critique of oral presentations. Illustrations of research data and thesis preparation. Philosophy and methods of research.
QA: PTH 905

855. Proseminar
Summer of odd-numbered years. 2(2-0)
R: Approval of department.
Faculty supervised work on an experimental, theoretical or applied problem in experimental pathology.

856. Pathoanatomy
Summer of even-numbered years. 3(3-0)
R: Approval of department.
Pathologic changes in tissues of animals used in toxicologic studies. Clinical pathologic assessments. Gross, histologic, and ultrastructural changes in organ systems.
QA: PTH 818

857. Correlative Diagnostic Pathology
Fall, Spring, Summer. 3(0-6)
R: Approval of department.
Diagnosis of animal diseases by necropsy, biopsy, or clinical pathology. Correlation of diagnostic test results with history, laboratory data and morphologic findings. Compiled and formal presentation of findings.
QA: PTH 808, PTH 810

899. Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits.
A student may earn a maximum of 24 credits in all enrollments for this course.
R: Admission to doctoral program in Pathology.
QA: PTH 999

PEDIATRICS AND HUMAN DEVELOPMENT

PHD

Department of Pediatrics and Human Development
College of Human Medicine

523. Genetics for Medical Practice
Fall, Spring, Summer. 1(1-0) Interdepartmental with 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.
A student may earn a maximum of 4 credits in all enrollments for this course.
R: PHD 523 I: 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.
A student may earn a maximum of 6 credits in all enrollments for this course.
R: Graduate-professional students in colleges of Human and Osteopathic Medicine.

600. Pediatric Specialty Clerkship
Fall, Spring, Summer. 12 credits.
R: Open only to graduate-professional students in College of Human Medicine.
Clinical experiences including outpatient and community setting involving ongoing child health care.

602. Ambulatory Pediatrics
Fall, Spring, Summer. 6 to 12 credits.
A student may earn a maximum of 12 credits in all enrollments for this course.
P: PHD 600. R: Open only to graduate-professional students in College of Human Medicine.

603. Pediatric Infectious Diseases Clerkship
Fall, Spring, Summer. 6 to 12 credits.
A student may earn a maximum of 12 credits in all enrollments for this course.
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.
A student may earn a maximum of 12 credits in all enrollments for this course.
P: PHD 600. R: Open only to graduate-professional students in College of Human Medicine.
Clinical experiences: modern neonatal techniques and care patterns for neonates including follow up.
QA: PHD 800

605. Pediatric Cardiology Clerkship
Fall, Spring, Summer. 6 to 12 credits.
A student may earn a maximum of 12 credits in all enrollments for this course.
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
Fall, Spring, Summer. 6 to 12 credits.
A student may earn a maximum of 12 credits in all enrollments for this course.
P: PHD 600. R: Grad professional students in College of Human Medicine.
Clinical experience in evaluating and managing pediatric patients with endocrine and metabolic disorders.

607. Pediatric Hematology and Oncology
Fall, Spring, Summer. 6 to 12 credits.
A student may earn a maximum of 12 credits in all enrollments for this course.
P: PHD 600. R: Open only to graduate-professional students in College of Human Medicine.
Clinical and hospital experiences in evaluating patients with hematologic and oncologic disorders.

608. Pediatric Pulmonary Disease Clerkship
Fall, Spring, Summer. 6 to 12 credits.
A student may earn a maximum of 12 credits in all enrollments for this course.
P: PHD 600. R: Open only to graduate-professional students in College of Human Medicine.
Inpatient and outpatient clinical experiences in evaluating and managing pediatric patients with pulmonary problems. Diagnostic procedures, clinically relevant physiology, current research.

PEDIATRICS

PED

Department of Pediatrics
College of Osteopathic Medicine

580. Health Professionals' Role in the Treatment of Substance Abuse
Spring. 1(0-0)
R: Open only to graduate and graduate-professional students in the colleges of Human Medicine, Nursing, and Osteopathic Medicine or approval of department.
Practical knowledge base for recognizing and dealing with individuals affected by substance abuse.
QA: PED 580

589. Special Problems in Pediatrics
Fall, Spring, Summer. 1 to 24 credits.
A student may earn a maximum of 24 credits in all enrollments for this course.
R: Open only to graduate-professional students in College of Osteopathic Medicine. Approval of department.
Experimental, theoretical, or applied problems under faculty direction.
QA: PED 590

600. Pediatrics Clerkship
Fall, Spring, Summer. 1 to 6 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 colleges of Osteopathic Medicine and Human Medicine upon completion of Units I and II.
Practical clinical exposure in the area of pediatrics.
QA: PED 600