

**851. Advanced General Pathology**  
Fall of even-numbered years. 3(3-0)  
P: PTH 852 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 neoplasm.  
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.  
Hematology including anemias, leukocyte responses and hemostasis. Clinical chemistry including tests to evaluate organs.

**855. Proseminar**  
Fall of odd-numbered years. 2(2-0)  
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 805

**856. Pathotoxicology**  
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

**890. Problems in Veterinary Pathology**  
Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course.  
R: Approval of department.  
Faculty supervised work on an experimental, theoretical or applied problem in veterinary pathology.

**891. Problems in Pathology**  
Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course.  
R: Approval of department.  
Faculty supervised work on an experimental, theoretical or applied problem in pathology.  
QA: PTH 800

**892. Pathology Seminar**  
Fall, Spring. 1(1-0) A student may earn a maximum of 3 credits in all enrollments for this course.  
R: Approval of department.  
Presentation and discussion of current topics in pathology by departmental graduate students, faculty or outside speakers.  
QA: PTH 801

**899. Master's Thesis Research**  
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course.  
R: Approval of department.

QA: PTH 899

**999. Doctoral Dissertation Research**  
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 36 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**  
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 8 credits in all enrollments for this course.  
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. A student may earn a maximum of 12 credits in all enrollments for this course.  
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**  
Fall, Spring, Summer. 12 credits.  
R: Open only to graduate-professional students in College of Human Medicine. Completion of preclinical CHM curriculum.  
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.

**601. Human Development and Pediatric Sub-specialties**  
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.  
Experience in clinical, behavioral, and basic sciences related to pediatrics and human development. Temporary approval effective from Fall Semester 1992 through Summer Semester 1994.  
QP: PHD 600

**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.  
Clinical experience in outpatient and community setting involving ongoing child health care.

**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.  
QP: PHD 600

**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 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.  
Clinic and hospital experience in evaluating 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: Grad professional students in College of Human Medicine  
Clinical experience in evaluating and managing pediatric patients with common 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(1-0)  
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

**590. Special Problems in Pediatrics**  
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 48 credits in all enrollments for this course.  
R: Open only to graduate-professional students in the 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