

**853 Advanced Systemic Pathology**  
Spring of odd years. 4(3-2) R: Approval of department.

Pathological aspects of the nervous, endocrine, cardiovascular, respiratory, urinary, genital, musculoskeletal, integumentary and special sense systems.

**854 Advanced Clinical Pathology**  
Summer. 3(3-0) R: Approval of department.  
Hematology including anemias, leukocyte responses and hemostasis. Cytology including inflammation, infection and neoplasia. Evaluation of clinical chemistry data.

**855 Essentials of Scientific Communication**  
Fall of odd 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.

**856 Concepts in Toxicologic Pathology**  
Summer of odd years. 2(2-0) 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.

**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.

**858 Pathology of Avian Diseases**  
Spring of even years. 2(2-0) R: Approval of department.

An overview of disease and pathology affecting domestic poultry, pet birds, and wild birds.

**859 Avian Histopathology Laboratory**  
Spring of even years. 1(0-2) R: Approval of department.

Recognition and description of microscopic lesions of avian diseases.

**860 Clinical Laboratory Diagnosis of Infectious Diseases**  
Spring of even years. 2(2-0) Interdepartmental with Medical Technology. Administered by Medical Technology Program. RB: (MMG 451 and MMG 464)

Laboratory techniques for diagnosing infectious diseases in humans. Emphasis on differential diagnosis and correlation of microbiological results with serology, hematology, and clinical chemistry.

**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.

**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.

**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.

Master's thesis research.

**901 Investigating the Lung**  
Fall of even years. 2(2-0) Interdepartmental with Large Animal Clinical Sciences; Physiology. Administered by Department of Large Animal Clinical Sciences. R: Open only to graduate students.

Integrative biology of the lung; structure and function; molecular, cellular, and organ responses to injury.

**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. Doctoral dissertation research.

## PEDIATRICS PED

### Department of Pediatrics and Human Development College of Osteopathic Medicine

**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.

**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.

**602 Primary Care Ambulatory Clerkship**  
Fall, Spring, Summer. 1 to 36 credits. A student may earn a maximum of 36 credits in all enrollments for this course. Interdepartmental with Osteopathic Medicine; Internal Medicine; Osteopathic Surgical Specialties; Psychiatry; Family and Community Medicine. Administered by Department of Osteopathic Medicine. RB: Successful completion of the preclerkship requirements in College of Osteopathic Medicine Units I and II.

A 24-week ambulatory care continuity experience involving 12 weeks in a multidisciplinary environment (family medicine, pediatrics, and internal medicine), 4 weeks in family medicine and 8 weeks in specialty areas (internal medicine, surgery, pediatrics, and obstetrics and gynecology). Didactic sessions are scheduled concurrently.

**619 Ambulatory Care Clerkship**  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 15 credits in all enrollments for this course. Interdepartmental with Family Practice; Medicine. Administered by Department of Family Practice. RB: (FMP 602) R: Open only to graduate-professional students in College of Human Medicine.

Continuous and comprehensive patient care under supervision of appropriate physicians.

**620 Directed Studies**  
Fall, Spring, Summer. 1 to 30 credits. A student may earn a maximum of 30 credits in all enrollments for this course. RB: (PED 600) R: Open only to graduate-professional students in the College of Osteopathic Medicine. Approval of department.

Study in general or specialty pediatrics.

## 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 and Molecular Biology. R: Graduate-professional students in colleges of Human and Osteopathic Medicine. SA: BCH 523

Basic principles of genetics for medical students.

**526 Molecular Biology and Medical Genetics**  
Fall. 2 credits. Interdepartmental with Biochemistry and Molecular Biology. Administered by Department of Biochemistry and Molecular Biology. R: Restricted to students enrolled in the M.D. (CHM) or D.O. (COM) programs. SA: BCH 526 Not open to students with credit in PHD 523.

Basic principles of human medical genetics; storage and expression of genetic information; transmission of genetic information to progeny.

**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. 6 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 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.