

Pathology—PTH

- 631 Necropsy Clerkship**
Fall, Spring. 3 credits. RB: (PTH 630) Completion of Semester 5 of the Graduate Professional Program in the College of Veterinary Medicine.
Supervised necropsy. Interpretation and presentation of findings.
- 632 Problems in Veterinary Pathology**
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Completion of Semester 5 of the graduate professional program in the College of Veterinary Medicine. R: Approval of department.
Supervised projects involving gross pathology, histopathology, clinical pathology, or molecular pathology.
- 634 Endocrinology Clerkship**
Spring. 3 credits. RB: Open only to graduate-professional students who have completed semester 5 of the graduate professional program in the College of Veterinary Medicine.
Principles of endocrinology and diagnosis of endocrinology disorders. Case review and interpretation.
- 635 Special Problems in Histopathology and Cytology Clerkship**
Spring. 3 credits. P:M: (PTH 630) RB: Completion of Semester 5 of the professional program in the College of Veterinary Medicine.
Study of the histopathology and clinical cytology of various diseases of veterinary importance.
- 804 Molecular and Developmental Neurobiology**
Fall. 3(3-0) Interdepartmental with Neuroscience; Pharmacology and Toxicology; Psychology; Zoology. Administered by Program in Neuroscience. RB: Bachelor's degree in a Biological Science or Psychology. R: Open only to graduate students in the Neuroscience major.
Nervous system specific gene transcription and translation. Maturation, degeneration, plasticity and repair in the nervous system.
- 812 Advanced Clinical Chemistry**
Spring of even years. 2(2-0) Interdepartmental with Medical Technology. Administered by Medical Technology Program. RB: (BMB 462 and MT 414 and MT 416)
Biochemical basis of selected pathologic conditions including inborn errors of metabolism, endocrine and other genetic disorders. Emphasis on current diagnostic techniques.
- 820 Advanced Human Hematology**
Spring of odd years. 2(2-0) Interdepartmental with Medical Technology. Administered by Medical Technology Program. RB: (MT 424)
Pathogenesis, mechanisms, and morphological pictures. Laboratory tests and interpretation of results.
- 830 Concepts in Molecular Biology**
Fall, Spring. 2(2-0) Interdepartmental with Medical Technology. Administered by Medical Technology Program. RB: One course in biochemistry or concurrently.
Techniques and theories of molecular biology, nucleic acid synthesis and isolation, enzymatic digestion and modification, electrophoresis, hybridization, amplification, library construction, and cloning.
- 851 Advanced General Pathology**
Fall of even years. 3(3-0) RB: (PTH 852) concurrently. R: Approval of department.
Fundamental concepts of cell injury, inflammation, and oncogenesis. Mechanisms of disease.
- 852 Advanced General Pathology Laboratory**
Fall of even years. 1(0-2) RB: PTH 851 concurrently. R: Approval of department.
Histopathologic and ultrastructural study of general morphologic patterns of inflammation cell injury and neoplasm.
- 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.
- 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**
Fall of odd 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.
- 893 Pathology Case Discussion Seminar**
Fall, Spring. 1(1-0) A student may earn a maximum of 6 credits in all enrollments for this course. RB: (DVM and ENROLPROFV) DVM degree or current enrollment as a professional veterinary student required
Utilization of a group of theme-based veterinary cases to train pathology residents and graduate students in diagnostic pathology.
- 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 42 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 Internal Medicine; Osteopathic Surgical Specialties; Osteopathic Medicine; Psychiatry; Family and Community 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.

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.

601 Human Development and Pediatric Sub-specialties
 Fall, Spring, Summer. 6 to 24 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: (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.

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. RB: (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. RB: (PHD 600) R: Open only to graduate-professional students in College of Human Medicine.

Office, clinic, and inpatient experiences in evaluating and managing pediatric patients with infectious diseases.

604 Neonatology
 Fall, Spring, Summer. 6 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. RB: (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.

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. RB: (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. RB: (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. Fall: Kazoo, Flint, GR, Saginaw, UP, Lansing. Spring: Same as above. Summer: Same as above. A student may earn a maximum of 12 credits in all enrollments for this course. RB: (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

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. RB: (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.

633 Extended Clinical Experience
 Fall, Spring, Summer. 6(6-0) Fall: All six(6) campuses. Spring: All six(6) campuses. Summer: All six(6) campuses. P:M: (PHD 600)

Based in community hospitals and ambulatory sites, this is a 4 week clinical experience emphasizing interviewing skills, history, physical exam, problem solving and therapy.

635 Core Competencies I
 Fall, Spring, Summer. 2(2-0) Fall: Flint-GR-Saginaw-Lansing-Kalamazoo-UP. Spring: same as above. Summer: save as above. A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Human Medicine; Family Practice; Medicine. Administered by College of Human Medicine. R: Open only to graduate-professional students in College of Human Medicine.

Core knowledge and skills from an interdisciplinary perspective.

PEDIATRICS AND PHD HUMAN DEVELOPMENT

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.