PATHOLOGY

College of Human Medicine
College of Osteopathic Medicine
College of Veterinary Medicine

404. General Pathology
Fall, Spring. 5(3-6) ANT 420, Junior Medical Technology majors, or approval of department.

407. Clinical Pathology
Winer, Summer. 5(3-0) or 5(3-4) Approval of department. Theory and techniques in hematology and medical approval of department.

408. Clinical Pathology
Fall, Spring. 5(3-6) or 5(3-4) Approval of department. Immunohematology, urinalysis, and topics in blood chemistry.

502. Human Pathology I
Winer. 2 to 5 credits. Admission to a college of medicine or approval of department ANT 560 for College of Osteopathic Medicine students. Pathologic processes and specific disease syndromes with emphasis on clinical applications. Concepts of disease and pathologic process in selected common diseases or conditions for the beginning medical student with a limited knowledge of anatomy, physiology and biochemistry.

503. Human Pathology II
Spring. 3(3-0) PTH 502. An introductory study of neuropathology in which vocabulary and concepts of neuromuscular diseases are systematically reviewed. Self-instructional option available.

504. Human Pathology III
Fall. 3(2-2) PTH 503 or approval of department. A continuation of PTH 503. Diseases of the cardiovascular system, including stress effects, arteriosclerosis and disorders of aortic, coronary and endocrine regulation. Laboratory sessions include the study of histologic sections.

505. Human Pathology IV
Fall. 3(2-2) PTH 504 or approval of department. A continuation of PTH 504. The systems include: lung, kidney, male genitalia, bone and joint tissues. In the laboratory sections, gross and microscopic changes in diseased tissues are studied and correlated with lecture material. Separate lab sessions covering pulmonary function tests, acid-base balance and urinalysis are included.

506. Human Pathology V
Spring. 5(2-2) PTH 505 or approval of department. A continuation of PTH 505. The systems include gastrointestinal tract (including liver and pancreas), female reproductive tract and breast.

520. Biology of Blood Diseases Laboratory
Spring. 1(0-3) Enrollment in a college of medicine or a graduate program in a biological science, MED 539 concurrently. Laboratory experience correlating basic science and clinical concepts of hematology.

550. Veterinary Pathology
Spring. 5(3-4) Third-year Veterinary Medicine students or approval of department. Principles of pathology, including causes of disease, distribution of cell growth and metabolism, necrosis, circulatory changes, inflammation and neoplasia.

552. Veterinary Clinical Pathology
Winter. 4(3-1) Fifth-year Veterinary Medicine students or approval of department. Technical aspects, principles and interpretation of selected laboratory procedures in hematology, chemistry, cytology and related areas.

560. Veterinary Pathology I
Winer, Winter. 2 to 5 credits. Veterinary science students or approval of department. Principles of pathology, including causes of disease, distribution of cell growth and metabolism, necrosis, circulatory changes, inflammation and neoplasia.

565. Problems in Veterinary Clinical Pathology
Fall, Winter, Spring, Summer. 4 credits. Satisfactory completion of term 8 of the professional veterinary curriculum, approval of department. Concepts in laboratory interpretation and diagnosis.

605. Problems in Veterinary Necropsy
Fall, Winter, Spring, Summer. 4 credits. Satisfactory completion of term 8 of the professional veterinary curriculum, approval of department. Supervised necropsy and interpretation of findings.

655. Problems in Veterinary Clinical Pathology
Fall, Winter, Spring, Summer. 4 credits. Satisfactory completion of term 8 of the professional veterinary curriculum, approval of department. Problems related to subspecialties such as hematology, clinical chemistry, cytology and applied immunology.

656. Problems in Veterinary Necropsy
Fall, Winter, Spring, Summer. 4 credits. Satisfactory completion of term 8 of the professional veterinary curriculum, approval of department. Problems related to necropsy and interpretation of findings.

800. Problems in Pathology
Fall, Winter, Spring, Summer. Variable credits. Approval of department. Elective work for students in veterinary medicine interested in pathology as a specialty, or in the special pathology of diseases of a particular class or species, and for graduate minors and majors interested in pathological techniques or in non-thesis research.

801. Pathology Seminar
Fall, Winter, Spring, Summer. 1(1-0) May reenroll for a maximum of 3 credits for M.S. candidates and 6 credits for Ph.D. candidates. Approval of department. Seminar required of all majors in pathology.

802. Advanced Histopathology
Fall, Winter, Spring, Summer. 5(6-0) Approval of department. A relatively advanced and comprehensive study in the histopathologic aspects of systemic and special pathology; independent study in the field of pathogenesis and microscopic pathology.

803. Advanced Histopathology
Fall, Winter, Spring. 5(6-0) PTH 802 and approval of department. Continuation of PTH 802.

805. Pathology Proseminar
Fall, Winter, Spring, Summer. 3(2-0) Approval of department. Philosophy and methods of research; thesis and other research reports; literature review; illustration of research data; practical assignments.

810. Postmortem Diagnosis
Fall, Winter, Spring, Summer. 3(0-9) May reenroll for a maximum of 6 credits. Approval of department. Required of majors.

811. Advanced Clinical Pathology
Fall, Winter, Spring. 3(1-6) Approval of department. Application of standard and newer techniques and instrumentation in hematology, biochemistry, parasitology, etc., to the diagnosis of disease.

812. Hematology
Winter. 5(3-4) PTH 408 or approval of department. Pathology of diseases of blood and an analysis of diagnostic laboratory procedures.

820. Oncology
Spring. 3(0-9) Approval of department. A study of benign and malignant neoplasms with emphasis on gross and microscopic characteristics and diagnosis.

826. Laboratory Animal Pathology
Spring. 4(3-3) Graduate status and approval of department. Macro and microscopic studies on the diseases of laboratory animals with special emphasis on naturally occurring diseases which might interfere with the interpretation of experimental results.

899. Master's Thesis Research
Fall, Winter, Spring, Summer. Variable credits. Approval of department.

921. Pathology of Nutritional and Metabolic Diseases
Summer. Even-numbered years. 4(3-2) Approval of department; PTH 404 or ANT 420, ANT 555, BCH 452, HMF 462 recommended. Interdepartmental with Human Nutrition and Foods and the departments of Large Animal Surgery and Medicine, and Animal Husbandry, Administered by Human Nutrition and Foods, Development, physiopathology and morphologic pathology of nutritional and metabolic diseases including carbohydrate, protein, fatty acid, vitamin and mineral deficiencies, their experimental induction and their medical or economic significance.

980. Histopathologic Diagnosis
Fall, Winter, Spring, Summer. 3(0-9) May reenroll for a maximum of 6 credits. PTH 803, PTH 802. Trimming, histopathologic examination, description, diagnosis and reporting of specimens from biopsy and necropsy.
Section 1: Pathology

Descriptions of disease and correlation of these with the clinical aspects of disease.

Section 2: Doctoral Dissertation Research

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

Section 3: Pediatrics (Established effective January 1, 1979.)

College of Osteopathic Medicine

500. Special Problems in Pediatrics
Fall, Winter, Spring, Summer. 1 to 8 credits. Approval of department. Each student will work under direction of a faculty member on an experimental, theoretical or applied problem.

600. Pediatrics Clerkship
(T O M 652.) Fall, Winter, Spring, Summer. 6 or 8 credits. Grade P in all courses offered in terms I through 8 or approval of department. Practical clinical exposure in the area of pediatrics. Program developed to achieve proficiency in motor skills and aptitudes; comprehension of concepts and principles; patient evaluation, diagnosis, management and therapy.

620. Directed Studies
Fall, Winter, Spring. Summer. 2 to 24 credits. PED 600 or approval of department. Study in general or specialty pediatrics.

Section 4: Pediatrics and Human Development (PHD)

(Name changed July 1, 1979. Formerly Department of Human Development.)

College of Human Medicine

520. Genetics Clinic
Fall, Winter, Spring, Summer. 1 to 3 credits. May reenroll for a maximum of 9 credits. Students will interview and examine patients with heritable disorders, perform related laboratory diagnostic procedures, and participate in genetic counseling conferences and discussions.

531. Medical Genetics
Spring. 1(1-0) ANT 544 or approval of department. Basic genetic principles and their application to clinical medicine, prenatal genetic diagnosis, exercises in genetic counseling and the importance of relevant laboratory tests.

532. Phenomena of Development
Fall. 5(3-0) PHD 531 or approval of department. Normal psychological and physical development of the human including intellectual, social, emotional and motor/psychological growth from infancy through adolescence. Clinical examples highlight deviations from the normal course of development.

590. Special Problems in Human Development
Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 12 credits. Human Medicine students or approval of department. Each student will work under direction of a staff member on an experimental, theoretical or applied problem.

608. Pediatric Specialty Clerkship
Fall, Winter, Spring, Summer. 1 to 17 credits. May reenroll for a maximum of 43 credits. H M 602; primary clerkship. Clinical experience with pediatric patients under the direction of members of the faculty of the Department of Human Development and community pediatricians. Fall, Saginaw, Winter, Lansing, Spring, Grand Rapids, Summer, Flint.

609. Human Development and Pediatric Sub-Specialities
Fall, Winter, Spring. Summer. 1 to 17 credits. May reenroll for a maximum of 34 credits. H M 602. Elective experiences in selected clinical and basic sciences related to pediatrics and human development.

610. Ambulatory Pediatrics
Fall, Winter, Spring, Summer. 1 to 12 credits. May reenroll for a maximum of 12 credits. PHD 608. Clinical experience in outpatient and community settings involving ongoing child health care including chronic medical illnesses and common behavioral problems.

611. Infectious Diseases
Fall, Winter, Spring, Summer. 1 to 12 credits. May reenroll for a maximum of 12 credits. PHD 608. Combined office and clinic inpatient experience in evaluating and managing pediatric patients with infectious diseases.

612. Neonatology
Fall, Winter, Spring, Summer. 1 to 12 credits. May reenroll for a maximum of 12 credits. PHD 608. Clinical experience involving modern neonatal techniques and care patterns for the sick neonate.

613. Pediatric Cardiology
Fall, Winter, Spring, Summer. 1 to 12 credits. May reenroll for a maximum of 12 credits. PHD 608. Office, clinic and hospital experience in diagnostic and therapeutic pediatric cardiology including special diagnostic procedures.

614. Pediatric Endocrinology and Metabolism
Fall, Winter, Spring, Summer. 1 to 12 credits. May reenroll for a maximum of 12 credits. PHD 608. Clinic and hospital experience in evaluating patients with endocrine and metabolic disorders.

615. Pediatric Hematology and Oncology
Fall, Winter, Spring, Summer. 1 to 12 credits. May reenroll for a maximum of 12 credits. PHD 608. Clinical experience in evaluating and managing pediatric patients with common hematologic and oncologic disorders.

Section 5: Pharmacology and Toxicology (PHM)

(Effective July 1, 1978. Formerly Department of Pharmacology)

College of Human Medicine
College of Osteopathic Medicine
College of Veterinary Medicine

350. Introductory Human Pharmacology
Spring. 3(3-0) PSL 432 or PSL 241 or concurrently; or approval of department. General principles; central nervous system, autonomic nervous system, cardiovascular and renal drugs; chemotherapy; and other selected basic topics.

430. Drug Abuse
Fall of odd-numbered years. 4(4-0) Juniors or approval of department. Biology and chemistry recommended. Actions, mechanisms of action, toxicity and uses of drugs of abuse. Sociological and psychological aspects of drug abuse and the legal aspects of the sale and distribution of drugs are considered.

480. Special Problems
Fall, Winter, Spring, Summer. 1 to 3 credits. May reenroll for a maximum of 9 credits. Approval of department. Limited amounts of individual work on selected research problems for undergraduate students.

503. Cell Biology
Fall. 5(5-0) Admission to the College of Human Medicine. Interdepartmental with the departments of Biochemistry, Microbiology and Public Health, and Physiology. Administered by the Department of Microbiology and Public Health. Principles of cell biology for medical students.

520A. Principles of Pharmacology
Fall. 4(4-0) PSL 500A, PSL 500C. Drug absorption, distribution, biotransformation, elimination, receptor theory and pharmacogenetics; chemical toxicity; autonomic nervous system, cardiovascular and renal pharmacology.

520B. Principles of Pharmacology
Winter. 4(4-0) PSL 500A; BCH 501. Drug absorption, distribution, biotransformation, elimination, antagonism; receptor theory and pharmacogenetics. Chemotherapy: antineoplastic, antiviral and antimicrobial agents. Toxicology and emergency therapies. Pharmacology related to the autonomic nervous system.

521A. Pharmacodynamics
Winter. 6(4-4) PSL 500A. Primarily for students of Veterinary Medicine. Endocrine, autonomic and central nervous system pharmacology; chemotherapy; antimicrobial, antihelmintics, antineoplastics.