810. Postmortem Diagnosis
Fall. 3(0-9) May reenroll for a maximum of 6 credits. Approval of department.
Diagnosis of animal diseases by means of necropsy and other laboratory techniques. Emphasis on correlation and interpretation of gross and microscopic lesions and results of other tests.

811. Histopathologic Diagnosis
Fall. Winter, Spring. 5(3-4) M T 407 or approval of department.
Selected topics in hematology including the pathogenesis, mechanisms and morphology of hematologic diseases in humans.

812. Advanced Human Hematology
Winter. 5(3-4) M T 407 or approval of department.
Selected topics in hematology including the pathogenesis, mechanisms and morphology of hematologic diseases in humans.

815. Histopathologic Diagnosis
Fall. Winter, Spring. 1 to 6 credits. May reenroll for a maximum of 6 credits. PTH 802, PTH 803, PTH 804, PTH 810, approval of department.
Preparation, histopathologic examination, description, diagnosis and reporting of specimens from biopsy and necropsy.

818. Pathotaxiology
Summer of even-numbered years. 4(4-0) One graduate course in pathology or approval of instructor.
Pathologic changes in tissues of animals used in toxicologic studies. Clinical pathologic assessments. Gross, histologic and ultrastructural changes in organ systems.

820. Advanced Human Hematology
Fall of odd-numbered years. 2(2-0) M T 420, M T 421 or approval of department.
Selected topics in hematology including the pathogenesis, mechanisms and morphological picture of hematologic diseases in humans.

821. Advanced Veterinary Hematology
Spring of odd-numbered years. 4(3-2)
Approval of department.
Current concepts in the pathogenesis, mechanisms and morphology of hematologic diseases of animal species.

822. Advanced Clinical Biochemistry
Spring of even-numbered years. 4(3-3) Approval of department.
Selected topics in clinical biochemistry, enzymology, immunopathology and related disciplines that focus on current technology used in the diagnosis of disease.

826. Laboratory Animal Pathology
Winter of even-numbered years. 4(3-3) Approval of department.
Cross, histologic, ultrastructural and clinical-pathologic study of diseases of laboratory animals.

840. Advanced Hemostasis
Fall of even-numbered years. 2(2-0) M.S. candidates in Clinical Laboratory Science or approval of department. Interdepartmental with and administered by Medical Technology Program.
Physiology, pathophysiology and laboratory evaluation of hemostatic disorders.

899. Master’s Thesis Research
Fall, Winter, Spring. Summer. Variable credit. Approval of department.
571. Infant through Adolescent Development and Genetics
Fall, Winter, 4(4-0) H M 570
Characteristics of physical, cognitive, language, social and emotional development, infancy through early adolescence. Genetic basis of development. Interaction of biology, psychology and social factors in the developmental process.

573. Behavioral Problems: Infancy through Adolescence
Fall, 3(3-0) H M 573. Interdepartmental with the Department of Psychiatry.
Origin, course and treatment of disorders of function and behavior in infancy through each stage of childhood. Commonly seen by physicians. Emphasis on role of development and biopsychosocial interaction.

590. Special Problems in Human Development
Fall, Winter, Summer. 1 to 6 credits. May reenroll for a maximum of 12 credits. Human Medicine students admitted by permission of dean.
Each student will work under direction of a staff member on an experimental, research-oriented, thesis or applied problem.

607. Ambulatory Care Clerkship
Fall, Winter, Spring, Summer. 1 to 3 credits. May reenroll for a maximum of 9 credits. FMP 602. Interdepartmental with the departments of Family Practice, Medicine, and Psychiatry. Administered by the Department of Family Practice.
Outpatient experience, lasting an equivalent of 34 half-days and extending over a minimum of 38 weeks, within a community setting. Continuous and comprehensive patient care under supervision of appropriate physicians.

609. Human Development and Pediatric Sub-Specialties
Fall, Winter, Spring, Summer. 1 to 17 credits. May reenroll for a maximum of 43 credits. FMP 602. Clinical experience with pediatric patients under the direction of members of the faculty of the Department of Human Development and Community Pediatrics.

610. Ambulatory Pediatrics
Fall, Winter, Spring, Summer. 1 to 12 credits. May reenroll for a maximum of 12 credits. FPD 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. FPD 608. Combined office or clinic and 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. FPD 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. FPD 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. FPD 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. FPD 608. Clinical experience in evaluating and managing pediatric patients with common hematologic and oncologic disorders.

520. Medical Pharmacology I
Fall, 4(4-0) PSL 500A or PSL 500C; BCH 501 or BCH 512. Drug absorption, distribution, metabolism, elimination, antagonism; receptor theory and pharmacokinetics. Cardiac and renal drugs, pharmacology related to the autonomic nervous system.

521. Medical Pharmacology II
Winter, 4(4-0) PSH 520. Pharmacology of the central and peripheral nervous system. Neuromuscular junctions and influences of drugs upon these processes. Intrinsic neuronal circuitry; reticular formation; thalamus; mesocortex; cerebellum.

554. Veterinary Pharmacology and Toxicology I
Fall, 4(4-0) PSL 500B, PSL 500C. Drug absorption, distribution, metabolism, elimination, receptor theory and pharmacokinetics; chemical toxicity; autonomic nervous system, cardiovascular and renal pharmacology.

555. Veterinary Pharmacology and Toxicology II
Winter, 3(4-2) PSH 555. Endocrine, autonomic and central nervous system pharmacology; chemotherapy; antimicrobials, antihelmintics, antineoplastics.

582. Clinical Pharmacology Studies
Fall, Winter, Spring, Summer. 2(2-0) PSH 530 or approval of instructor. Cases in clinical pharmacology.

810. Synaptic Transmission
Fall, Spring of odd-numbered years. 4(4-0) Approval of department. Chemical and electrical aspects of nervous system impulse transmission at synaptic and neuromuscular junctions and influences of drugs upon these processes. Intrinsic neuronal circuitry; reticular formation; thalamus; mesocortex; cerebellum.

813. Cardiac Pharmacology
Fall of even-numbered years. 4(4-0) PSH 555 or PSH 551; PSL 501, approval of department. Effects of drugs on normal physiological and biochemical processes in cardiac cells. Emphasis is placed on cell electrophysiology and ion flux.

814. Advanced Principles of Toxicology
Spring of even-numbered years. 4(4-0) PSH 531 or PSH 555. Current biochemical and physiological mechanisms of toxicity on major organ systems. Mechanisms of mutagenicity, carcinogenicity and teratology.

819. Principles of Drug-Tissue Interactions
Summer. 5(4-2) Approval of department. Drug absorption, distribution, metabolism and excretion; drug-receptor interactions including methods for assessing receptor number and affinity; dose-response relationships; pharmacokinetics; altered drug sensitivity and response; toxicology.

820. Advanced General Pharmacology
Fall. 3(2-2) PSH 520 or concurrently. Discussions, demonstrations and laboratory designed to supplement information provided in PSH 530 on the pharmacokinetics and actions of drugs that influence the autonomic and cardiovascular systems.

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PHARMACOLOGY AND TOXICOLOGY

PHM

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

350. Introductory Human Pharmacology
Winter, Spring. 4(4-0) PSL 420 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) Approval of department. Biology and chemistry recommended. Actions, mechanism 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.

450. Introduction to Chemical Toxicology
Spring, 3(3-0) B S 210, B S 311, B S 312, CHEM 242. Potential risk of environmental chemicals to animal and human health.

480. Special Problems
Fall, Winter, Spring, Summer. 1 to 12 credits. May reenroll for a maximum of 9 credits. Approval of department. Limited amounts of individual work on selected research problems for undergraduate students.