

**PEDIATRICS PED**

(Established effective January 1, 1979.)

**College of Osteopathic Medicine**

**590. 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**  
(O M 652.) Fall, Winter, Spring, Summer. 8 credits. Grade P in all courses offered in terms 1 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.

**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. My reenroll for a maximum of 9 credits.  
Students will interview and examine patients with inheritable 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(5-0) PHD 531 or approval of department.

Normal psychological and physical development of the human including intellectual, social, emotional and endocrinological 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-Specialties**  
Fall, Winter, Spring, Summer. 1 to 17 credits. May reenroll for a maximum of 34 credits. H M 602.

Elected experiences in selected clinical and basic sciences related to pediatrics and human development.

**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, 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.

**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.

**520A. Principles of Pharmacology**  
Fall. 4(4-0) PSL 500B, 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. 5(4-2) PHM 520A. Primarily for students of Veterinary Medicine.

Endocrine, autocoid and central nervous system pharmacology; chemotherapy: antimicrobials, antihelminthics, antineoplastics.

**521B. Pharmacodynamics**  
Spring. 4(4-0) PHM 520B or PHM 520A.

Pharmacology of the central and peripheral nervous systems. Cardiovascular, renal and gastrointestinal drugs. Endocrine and autocoid pharmacology.

**810. Synaptic Transmission**  
Winter of odd-numbered years. 4(4-0) Approval of department.

Chemical and electrical aspects of nervous impulse transmission at synaptic and neuroeffector junctions and influences of drugs upon these processes. Intrinsic neuronal circuitry; reticular formation; thalamus; neocortex; cerebellum.

**811. Advanced Renal and Autocoid Pharmacology**  
Spring of even-numbered years. 4(4-0) PHM 521A or PHM 521B and approval of department.

Advanced concepts and current topics in renal and autocoid pharmacology.

**812. Advanced Principles of Pharmacology**  
Fall. 2(2-0) PHM 521A or PHM 521B, approval of department.

Pharmacodynamics, drug-receptor interactions, computer modeling, drug metabolism.

**813. Cardiac Pharmacology**  
Winter of even-numbered years. 4(4-0) PHM 520A, PHM 521A or PHM 520B, PHM 521B; PSL 801, PSL 802, PSL 803; and approval of department.

Effects of drugs on normal physiological and biochemical processes in cardiac cells are studied. Emphasis is placed on mechanisms of drug action.

**814. Advanced Principles of Toxicology**  
Spring of even-numbered years. 4(4-0) PHM 812.

Current biochemical and physiological mechanisms of toxicity on major organ systems. Mechanisms of mutagenicity, carcinogenicity and teratology.

**870. Problems**  
Fall, Winter, Spring, Summer. 2 to 4 credits. May reenroll for a maximum of 12 credits. Approval of department.

Limited amounts of individual work on selected research problems for first year graduate students in the Department of Pharmacology and Toxicology.

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

Individual work on research problems for the master's degree in pharmacology.

**910. Seminar**  
Fall, Winter, Spring. 1(1-0) May reenroll for a maximum of 3 credits. Approval of department.

Discussion of recent topics on pharmacology by departmental or outside speakers, or reporting of research efforts by graduate students of the Department of Pharmacology and Toxicology.

## Descriptions – Pharmacology and Toxicology

### of Courses

**980. Problems**  
Fall, Winter, Spring, Summer. 2 to 5 credits. May reenroll for a maximum of 20 credits. Approval of department.  
Limited work on selected research problems.

**999. Doctoral Dissertation Research**  
Fall, Winter, Spring, Summer. Variable credit. Approval of department.  
Individual work on research problems for the doctoral degree in pharmacology.

## PHILOSOPHY PHL

### College of Arts and Letters

Each of the courses PHL 101, PHL 102, PHL 103 is an independent gateway to an area of philosophy. Together they provide a comprehensive introduction to philosophical inquiry through contact with philosophical issues.

**101. Introduction to Philosophy: Ethics and Value (A)**  
Fall, Winter, Spring, Summer. 3(3-0)  
Students may not receive credit for both PHL 101 and PHL 330.

An inquiry into the nature of the right and the good, addressed to such fundamental problems as the objectivity of moral judgments, the criteria of right and wrong, and the grounds of moral responsibility.

**102. Introduction to Philosophy: Knowledge and Reality (A)**  
Fall, Winter, Spring, Summer. 3(3-0)

An examination of such basic philosophical problems as free will and determinism, the existence of God, the relation of mind and body, and the scope and limits of human knowledge.

**103. Introduction to Philosophy: Logic**  
Fall, Winter, Spring, Summer. 3(3-0)

An examination of deductive and inductive reasoning and of such topics as rational argumentation, fallacies, definition, meaning, truth, and evidence. Designed to improve students' capacities to read and think critically.

**120. Classics of Philosophical Literature (A)**  
Fall, Winter, Spring. 4(4-0)

An introduction to contrasting classics of literary and philosophical importance. Primary texts from such philosophers as Plato, Lucretius, Descartes, Hume, Nietzsche, James, Russell and Sartre will be read and discussed.

**200H. Honors Work**  
Fall, Winter, Spring. 1 to 16 credits.  
Approval of department.

**211. Ancient Philosophy (A)**  
Fall, Winter, Spring. 3(3-0)

An introduction to the history of philosophy: the Greek and Roman periods, with emphasis on Plato and Aristotle.

**212. Medieval and Early Modern Philosophy (A)**  
Winter, Spring. 3(3-0) PHL 211 recommended.

An introduction to the history of philosophy: the Middle Ages to the rise of modern science, with emphasis on Aquinas, Descartes, Spinoza and Leibniz.

**213. Modern Philosophy (A)**  
Fall, Spring. 3(3-0) PHL 212 recommended.

An introduction to the history of philosophy: the Enlightenment to the nineteenth century, with emphasis on Hume and Kant and such other philosophers as Locke, Berkeley, Hegel, Kierkegaard and Nietzsche.

**294. Special Topics**  
Fall, Winter, Spring, Summer. 2(2-0) to 6(6-0) Approval of department.

Intensive study of some particular problem or author in philosophy.

**311. Indian Philosophy**  
Fall, Winter. 3(3-0)

Metaphysical, ethical and social theories developed within major Indian philosophical systems; e.g., philosophical Buddhism, Vedantist transcendentalism, Samkya dualism, and the Realist schools.

**312. Chinese Philosophy**  
Spring. 3(3-0)

Major cosmological and ethical doctrines of such Chinese authors and movements as Confucius, Mo Tzu, Lao Tzu, Taoism, Yin-Yang dualism, Buddhism, responses to Western influences, the new China.

**315. American Philosophy**  
Spring, Summer. 3(3-0) Three credits in philosophy or approval of department.

Examination of such thinkers as Royce, Pierce, James, Dewey, Whitehead and Santayana, illustrating classic American contributions to philosophy.

**323. Existentialism**  
Fall, Winter, Spring. 3(3-0) Three credits in philosophy or approval of department.

An examination of a major existentialist author (or authors), so designed as to place existentialist views in significant relation to the tradition of European thought.

**330. Elements of Ethics**  
Fall, Winter, Spring, Summer. 3(3-0) Juniors. Students may not receive credit for both PHL 101 and PHL 330.

An inquiry into the nature of the right and the good, addressed to such fundamental problems as the objectivity of moral judgments, the criterion of right and wrong, and the grounds of moral responsibility.

**337. Logic I**  
Fall, Winter, Spring. 4(4-0)

Modern symbolic methods in deductive reasoning. The logic of connectives and quantifiers.

**338. Logic II**  
Fall, Winter, Spring. 4(4-0) PHL 337 or approval of department.

The logic of identity, functions, and descriptions. Theory-building: axioms, definitions, theorems.

**340. Moral Problems in Medicine and the Life Sciences**  
Fall, Winter, Spring. 4(4-0) Juniors.

Philosophical aspects of euthanasia, allocation of scarce medical resources, experimentation and informed consent, truth-telling and the doctor-patient relationship, genetic counseling, genetic engineering, behavior control, and health care delivery.

**341. Philosophical Aspects of Feminism**  
Fall, Winter, Spring. 4(4-0)

Conceptual issues in feminist theory. Such concepts as oppression, sexism and chauvinism, feminist separatism, rape, respect and self-respect, personhood, power and control and feminism will be analyzed and explored.

**342. Philosophy of the Counter Culture**  
Fall, Spring. 3(3-0)

Students will examine counter cultural critiques of contemporary culture and values; and develop, articulate, defend their own views on such issues, especially as those issues immediately affect their own lives.

**343. Ethical Issues in the Social Sciences**  
Winter. 3(3-0)

Philosophical treatment of ethical issues arising from the social scientists' conflicting obligations to their subjects, science, profession, career, personal values and society.

**350. Philosophy of Art**  
Fall, Winter, Spring. 3(3-0) Three credits in philosophy or 6 credits in art, music, or literature.

Inquiry into the principles of artistic activity made with a view to determining the conditions under which art is produced, the nature of its product, and the sources of its value.

**351. Contemporary Esthetic Theory**  
Winter. 3(3-0) Three credits in philosophy or 6 credits in art, music, or literature.

Critical examination of contemporary theory in esthetics and the philosophy of art, in which the primary categories of reflection upon the arts have gained their currency. Readings from such authors as Tolstoy, Santayana, Croce, Bullough, Freud, Parker, Prall, Greene.

**355. Philosophy of Religion**  
Winter, Spring. 3(3-0) Three credits in philosophy or 6 credits in religious studies or approval of department.

Alternative philosophical approaches to religion as a personal and/or social phenomenon. Contemporary problems of meaning, evidence and obligation in relation to religious beliefs and practices.

**360. Philosophy of Law**  
Fall, Winter, Spring. 3(3-0) Three credits in philosophy or 6 credits in political science or approval of department.

Philosophic examination of such legal concepts as punishment, responsibility, rights and duties, judicial decisions and justice, and such legal theories as natural law, positivism and realism.

**361. Philosophy of Technology**  
Fall, Winter. 4(4-0) Sophomores or approval of college. Interdepartmental with and administered by Lyman Briggs College.

Is our technology desirable? Are its social forms desirable? What alternatives are there? Students will develop and defend their own appraisals of technology.

**365. Social and Political Philosophy**  
Winter, Spring. 3(3-0) Three credits in philosophy or 6 credits in political science, or approval of department.

Philosophical justifications for political authority and individual liberty. Consideration of such theories as natural law, social contract, utilitarianism and historicism.