PHARMACOLOGY AND TOXICOLOGY

841*. Advanced Endocrine Physiology and Pharmacology
Fall of odd-numbered years. 4(0-0)
Interdepartmental with the Department(s) of Physiology, Psychology, P HL 431, P SL 429, BCH 451, BCH 452
R: Graduate Students
Basic and advanced concepts of endocrine and reproductive physiology and pharmacology
QA PHM 841

870*. Problems
Fall, Spring, Summer. 2 to 4 credits. May reenroll for a maximum of 12 credits.
R: Graduate Students
Approval of department
Limited amount of individual work on selected research problems for first-year graduate students in the Dept of PHM/TOX
QA PHM 870

910*. Seminar
Fall, Spring, Summer. 1 to 3 credits. May reenroll for a maximum of 6 credits.
R: Graduate Students
Approval of department
Discussion of recent topics in pharmacology and toxicology by department or invited outside speakers, or reporting on research by department students
QA PHM 910

980*. Problems
Fall, Spring. Summer. 2 to 5 credits. May reenroll for a maximum of 20 credits.
R: Graduate Students
Approval of department
Limited work in selected research projects
QA PHM 980

999*. Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. May reenroll for a maximum of 99 credits.
R: Graduate Students
Pharmacology and Toxicology Approval of department
Individual work on research problems for the doctoral degree in pharmacology
QA PHM 999

PHILOSOPHY

130. Logic and Reasoning
Fall, Spring, Summer. 3(3-0)
R: Not open to students with credit in PHL
Deductive and inductive reasoning. Topics such as rational argumentation, fallacies, definition, meaning, truth and evidence. Techniques for critical reading and thinking
QA PHL 103

200. Introduction to Philosophy
Fall, Spring. 3(3-0)
Theories of knowledge, values, and reality. Topics such as objectivity, relativism and cultural diversity, moral responsibility, aesthetic values, the self, existence of God, free will, minds and machines.
QA PHL 101 PHL 102 PHL 200

210. History of Western Philosophy: Ancient and Medieval
Fall. 3(3-0)
Greek philosophy with emphasis on Plato and Aristotle; Roman philosophy; and medieval philosophy.
QA PHL 211

211. History of Western Philosophy: Medieval
Spring. 3(3-0)
P: PHL 210 recommended
Philosophy from the Renaissance through the nineteenth century, with emphasis on such philosophers as Descartes, Spinoza, Locke, Hume, Kant, Hegel, Kierkegaard and Nietzsche.
QA PHL 213

312*. Chinese Philosophy
Spring. 3(3-0)
R: Not open to freshmen and sophomores
Central traditions in the history of Chinese philosophy: Confucianism, Taoism, Chan Buddhism, Neo-Confucianism.
QA PHL 312

320*. Existentialism
Fall, Spring. 3(3-0)
P: One PHL course
Husserl, Jaspers, Kierkegaard, Marx, Nietzsche, Sartre, and de Beauvoir. Topics such as hope, anxiety, bad faith, subjectivity, freedom, social being, phenomenological method.
QA PHL 323

330*. Formal Reasoning I
Fall, Spring. 4(4-0)
Formal methods in deductive reasoning. Logic of connectives and quantifiers, including identity, functions, and descriptions.
QA PHL 337 PHL 338

331*. Formal Reasoning II
Fall, Spring. 4(4-0)
QA PHL 337 QA PHL 338

340*. Ethics
Fall, Spring. 3(3-0)
P: One PHL course
Inquiry through the works of some important theorists, their critics and their contemporary followers. Aristotle, Hume, Kant, Mill, Sidgwick.
QA PHL 330 Qk PHL 411

344*. Ethical Issues in Health Care
Fall, Spring. 4(4-0)
R: Not open to freshmen and sophomores
Termination of treatment, truth-telling, informed consent, human experimentation, reproductive rights, allocation of scarce resources, justice and the health care system.
QA PHL 340

345*. Business Ethics
Fall. 4(4-0)
Interdepartmental with the Department(s) of General Business and Business Law.
R: Juniors and above
Ethical dimensions of the relationships between a business and its employees, consumers, other businesses, society, government, and the law. Readings from philosophical and business sources.
QA PHL 346

347*. Aesthetics
Fall. 3(3-0)
General introduction to theories of aesthetic value, the nature of art, and the works of such aestheticians as Plato, Hume, Kant, Hegel, Tolstoy, Santayana, Wittgenstein, Irensen, Langer, Murdoch.
QA PHL 350

350*. Moral and Political Issues
Fall. 3(3-0)
P: One PHL course
Justice, rights and responsibilities. Topics such as equality of opportunity, justice for the aged and future generations, and abortion.
QA PHL 350

354*. Philosophy of Law
Fall. Spring. 3(3-0)
P: One PHL course or two PLS courses
Legal concepts such as punishment, responsibility, rights and duties, and judicial decisions. Legal theories such as natural law, positivism and realism.
QA PHL 350

356*. Philosophical Aspects of Feminism
Fall, Spring. 4(4-0)
Conceptual and normative issues in feminist theory, such as sexism, oppression, correction, control, power, equality, personhood, respect and self-respect, rape, separatism, community, intimacy and autonomy.
QA PHL 354

357*. Philosophy of Karl Marx
Spring. 3(3-0)
P: One PHL course
Marx's philosophical thought and his bearing on science, religion, art and politics.
QA PHL 356

360*. Philosophy of Language
Fall. 4(4-0)
P: One course in philosophy.
Elementary topics in semantics, linguistic pragmatics, and philosophy of language. Meaning, denotation, speech acts and linguistic relativity.
QA PHL 357

359*. Nature of Science
Fall. Spring. 3(3-0)
P: One course in the biological, physical, or mathematical sciences. Conflicting views about science and values. Such topics as scientific methodology, the objectivity and value neutrality of science, the presuppositions, goals, and limits of science; science and decision making.
QA PHL 350

410*. Plato
Fall. 4(4-0)
P: PHL 210 or two other Philosophy courses.
Development of Platonic philosophy from the early Academy. Emphasis on the middle dialogues, especially the Republic.
QA PHL 411 QA PHL 410

411*. Aristotle
Spring. 4(4-0)
P: PHL 210 or PHL 410 or two other Philosophy courses.
R: Not open to freshmen and sophomores. Aristotle's major works and his major contributions to the sciences, metaphysics, ethics, and politics.
QA PHL 211 Qk PHL 411 ORPHIL 410 QA PHL 411 PHLA 12

412*. Medieval Philosophy
Fall of even-numbered years. 3(3-0)
P: PHL 210 or two other Philosophy courses.
R: Not open to freshmen and sophomores. Medieval philosophy from the fourth to the sixteenth centuries, emphasizing the contributions of Augustine and Aquinas.
QA PHL 211 ORPHIL 212 Qk PHIL/411 QA PHL 411

413*. Continental Rationalism
Fall of odd-numbered years. 4(4-0)
P: PHL 211 or two other Philosophy courses.
The rationalists of the seventeenth century, with emphasis on Descartes, Spinoza and Leibniz.
QA PHL 212 QA PHL 413

E-144 Courses with an asterisk (*) have not been approved by the University Committee on Curriculum.
Courses are subject to revision and final approval.

PHILOSOPHY

414*. British Empiricism Fall of even-numbered years. 3(3-0)
P: PHL 211 or two other Philosophy courses.
The philosophy that strives to trace all our ideas and beliefs, whether in science, morality, or religion, back to their source in experience. Emphasis on the works of Locke, Berkeley, and Hume.
QP: PHL 212 OR PHL 213 QA: PHL 416

415*. Kant Spring. 4(4-0)
P: PHL 211 or two other Philosophy courses.
Kant's metaphysical and epistemological system, focusing on his 'Critique of Pure Reason'.
QP: PHL213 QA: PHL423

416*. Hegel Spring of even-numbered years. 4(4-0)
P: PHL 211 or PHL 415 or three other Philosophy courses.
Hegel's dialectic and its bearing on both the history of philosophy and issues about science, politics, art and religion.
QP: PHL213 OR PHL423 QA: PHL427

417*. Nineteenth Century Philosophy Fall. 4(4-0)
P: PHL 210 or PHL 211.
Emphasis on attempts to overcome the Kantian limits on human knowledge postulated by Kant. Works by writers such as Fichte, Schopenhauer, Nietzsche, and James.
QP: PHL213 OR PHL423 QA: PHL419

418*. Topics in 20th-Century Analytical Philosophy Fall. 3(3-0) May reenroll for a maximum of 9 credits.
P: One Philosophy course at 300 level or above.
Issues in the works of such philosophers as Frege, Russell, Moore, Wittgenstein, Carnap, Quine, Austin, and Kripke.
QP: PHL420

420*. Topics in 20th-Century Continental Philosophy Fall. 4(4-0) May reenroll for a maximum of 12 credits.
P: 3 credits in Philosophy at 300 level or above.
Recent European movements such as phenomenology, poststructuralism, critical theory, hermeneutics, and philosophical anthropology.
QP: PHL424

421*. Topics in European Philosophy Spring. 3(3-0) May reenroll for a maximum of 9 credits.
P: PHL 320 or PHL 420.
A particular problem, topic, or author in nineteenth- and twentieth-century European philosophy, such as, Kierkegaard, Husserl, Heidegger, Lukács, Marxism vs. existentialism, and theories of interpretation.
QP: PHL423 QA: PHL428

420*. Topics in Philosophical Logic Spring. 3(3-0) May reenroll for a maximum of 9 credits.
P: PHL 330.
Selected topics from modal logic, model theory, artificial intelligence and deviant logics.
QP: PHL337 QA: PHL436

440*. Central Issues in Ethics Spring. 4(4-0)
P: PHL 340 or PHL 350 or PHL 450.
Twentieth-century discussions of universalism, utilitarianism, nature of a moral theory, moral language, relativism, skepticism, theory and practice, weaknesses of will, moral education, and justification.
QP: PHL430 OR PHL450 OR PHL431 QA: PHL432

447*. Advanced Aesthetics Fall of even-numbered years. 3(3-0)
P: PHL 347 or graduate student.
QP: PHL350

448*. Aesthetic Theory and Modernism Fall. 4(4-0) Interdepartmental with the Department(s) of English, Linguistics, Romance Languages, History, and Art.
R: Juniors and above
Problems, assumptions, and arguments of modern and contemporary aesthetic theory examined in the context of debates over modernity and modernist artistic practice.
QP: PHL434 ENG494 ROM494 LIN494 LAA434

459*. Topics in Social and Political Philosophy Fall. Spring. 3(3-0) May reenroll for a maximum of 9 credits.
P: PHL 340 or PHL 350 or PHL 440.
Political authority, individual liberty, aspects of social justice. Authors such as Plato, Hobbes, Locke, and Rawls.
QP: PHL330 QA: PHL465

460*. Epistemology Fall. 3(3-0)
P: One Philosophy course at the 300 level or above.
Theory of knowledge, belief, epistemic justification, determinism, and reason.
QP: PHL440

461*. Metaphysics Spring. 3(3-0)
R: One Philosophy course at the 300 level or above or two other Philosophy courses.
Basic concepts employed in trying to understand the nature of things. Concepts include universals, particulars, things, kinds, properties, events, persons, change, causality, chance, existence, possibility, necessity, space, and time.
QP: PHL445

462*. Philosophy of Mind Fall. 3(3-0)
P: One Philosophy course at the 300 level or above or two other Philosophy courses.
Modern theories of mind, consciousness, and mental states. Classical theories include dualism, behaviorism, rationalism, reductive and eliminative materialism, and functionalism.
QP: PHL447

463*. Introduction to Cognitive Science Spring. 3(3-0) Interdepartmental with the Department(s) of Linguistics, Psychology, and Computer Science.
P: PHL 441 or PSY 300 or LIN 401 or CPS 441.
The cognitive processing of information by animals, humans, and computers. Relevant issues in philosophy, linguistics, psychology, neurophysiology, and artificial intelligence.
QP: PHL 447 OR PSY 300 OR LIN 401 OR CPS 441.

480*. Philosophy of Science Fall. 4(4-0)
P: PHL 130 or PHL 330 or a 200 level math or stats course or instruc. appr.
Structure of scientific theories and explanation; causation, prediction, induction, confirmation, discovery, and scientific progress.
QP: PHL337 QA: PHL480 PHIL81

481*. Topics in Science Studies Spring. 3(3-0)
P: Three science courses or two philosophy courses or instructor approval.
Converging trends in philosophy, history, and sociology of science. Such topics as: scientific rationality and objectivity, evolutionary epistemology, continental approaches, feminist perspectives.
QP: PHL484

485*. Philosophy of Social Science Spring. 3(3-0)
P: 3 courses in social science or 2 courses in PHL or instruc. appr.
Philosophical and methodological issues in research such as: functional explanation, classification, the structure of evolutionary theory reductionism, observation and measurement, value-neutrality.
QP: PHL485

495*. Philosophy of Science Fall. Spring. 3(3-0)
P: 3 courses in social science or 2 courses in PHL or Instructor Approval.
Such topics as: explanation, theories and concepts in science, social sciences, historicism, relativism and relativism, comparison of logical empiricism, interpretive, and critical theory approaches.
QP: PHL485

497*. Philosophy of Mathematics Fall of odd-numbered years. 3(3-0)
P: 3 courses in mathematics or PHL 330 or Instructor Approval.
Analysis of the nature of mathematical truth and knowledge. Themes of logicism, formalism, intuitionism, and conventionalism are critically examined.
QP: PHL497

498*. Philosophy of Physical Science Fall of even-numbered years. 3(3-0)
P: 3 courses in physical science or 2 courses in PHL or Instructor Approval.
Philosophical problems of the physical sciences. The topics will be taken from such areas as: quantum mechanics, space-time, classical mechanics, relativists.

499*. Independent Study Fall, Spring, Summer. 1 to 4 credits.
P: May reenroll for a maximum of 9 credits.
R: Approval of the Department
Special projects arranged by individual students and a faculty member in areas supplementing regular course offerings.
QP: PHL 490

491*. Special Topics in Philosophy Fall, Spring, Summer. 3 to 4 credits.
P: May reenroll for a maximum of 9 credits.
R: Approval of the Department
Special topics supplementing regular course offerings proposed by faculty on a group study basis.
QP: PHL 494

492*. Seminar for Majors Fall. 3(3-0) May reenroll for a maximum of 9 credits.
P: 18 credits in Philosophy. Open only to majors in Philosophy or approval of department.
Advanced, variable topic seminar for undergraduate majors. Seminar presentations. Substantial paper.

499*. Senior Thesis Research Fall, Spring, Summer. 3-9?
P: Approval of the Department
An individual research project supervised by a faculty member that demonstrates the student's ability to do independent research and submit or present a major paper.
Courses are subject to revision and final approval.

PHILOSOPHY

510. Seminar in the History of Philosophy
Fall. 2 to 4 credits. May enroll for a maximum of 10 credits.
R: Graduate standing or approval of the department.
Major thinkers, themes, periods, or movements in the history of philosophy.
QA: PHL825

520. Seminar in Continental Philosophy
Fall of even-numbered years. 2 to 4 credits. May enroll for a maximum of 10 credits.
R: Graduate standing or approval of department.
Major figures or themes in 19th and 20th century continental philosophy.
QA: PHL841 PHL860

530. Seminar in Logic and the Philosophy of Language
Fall of odd-numbered years. 2 to 4 credits. May enroll for a maximum of 10 credits.
R: Graduate standing or approval of department.
Selected topic in Philosophy of Language, Philosophical Logic, and Metaphysics.
QA: PHL837 PHL870

540. Seminar in Value Theory
Fall. 2 to 4 credits. May enroll for a maximum of 10 credits.
R: Graduate standing or approval of department.
Major figures, themes, or periods in ethics or aesthetics.
QA: PHL830

545. Seminar in Business Ethics
Spring. 3-0: Interdepartmental with the Department(s) of General Business and Business Law,
R: Graduate standing or approval of department.
Ethical dimensions of such issues as corporate responsibility, preferential hiring, advertising, government regulation.
QA: PHL105

550. Seminar in Social and Political Philosophy
Spring of even-numbered years. 2 to 4 credits. May enroll for a maximum of 10 credits.
R: Graduate standing or approval of department.
Major figures, themes, or periods in social and political philosophy.
QA: PHL855

560. Seminar in Metaphysics and Epistemology
Fall. 2 to 4 credits. May enroll for a maximum of 15 credits.
R: Graduate standing or approval of department.
Selected topics in metaphysics, epistemology, and philosophy of mind.
QA: PHL841 PHL845

570. Seminar in Philosophy of Health Care
Fall. 2 to 4 credits. May enroll for a maximum of 15 credits.
R: Graduate standing or approval of department.
Ethical, political, theoretical, and methodological issues in medicine and health care.

580. Seminar in Philosophy of Science
Spring. 2 to 4 credits. May enroll for a maximum of 10 credits.
R: Graduate standing or approval of department.
Selected topics in the philosophy of the special sciences, in the metatheory of science, and in the social studies of science.
QA: PHL880

590. Independent Study
Fall, Spring. Summer. 1 to 10 credits. May enroll for a maximum of 20 credits.
R: Approval of the Department
Special projects, directed reading, and research arranged by an individual graduate student and a faculty member in areas supplementing regular course offerings.
QA: PHL 890

884. Practicum in Philosophy of Health Care
Spring. 4 to 6 credits.
R: PHL 944 R: Doctoral Standing or approval of department.
Study of ethical and policy issues in hospital and governmental agency settings.
QA: PHL 899

899. Master's Thesis Research-Plan A
Fall, Spring, Summer. 1 to 12 credits. May enroll for a maximum of 12 credits.
R: Approval of the Department
Directed research leading to a master's thesis, used in partial fulfillment of plan A master's degree requirements.
QA: PHL 999

PHYSICAL EDUCATION AND EXERCISE SCIENCE PES

101*. Aquatics
Fall, Spring, Summer. 10-3
R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108.
Skill and knowledge development in water-related activities. Separate course sections in activities such as swimming, diving, lifeguarding, water polo, and sailing.
QA: HCP 109

102*. Combative Sports
Fall, Spring, Summer. 10-3
R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108.
Skill and knowledge development in the art or sport of physical training. Separate course sections in activities such as judo, karate, aikido, and fencing.

103*. Conditioning
Fall, Spring, Summer. 10-3
R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108.
Knowledge and competency in physical fitness activities that emphasize cardiovascular and muscular training. Separate course sections in activities such as aerobic exercise, power walking, swim conditioning, and weight training.

104* Dance
Fall, Spring, Summer. 10-3
R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108.
Skill and knowledge development in dance activities. Separate course sections in dance styles such as ballet, modern, jazz, Latin, and social.
QA: HCP 211 HCP 111

105*. Gymnastics
Fall, Spring, Summer. 10-3
R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108.
Skill and knowledge development in gymnastics. Separate sections in activities such as apparatus, tumbling, and floor exercise.
QA: HCP 110

106*. Individual Sports
Fall, Spring, Summer. 10-3
R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108.
Skill and knowledge development in individual sports. Separate course sections in activities such as bowling, golf, skating, self defense, and track and field.
QA: HCP 106 HCP 107

107*. Racquet Sports
Fall, Spring, Summer. 10-3
R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108.
Skill and knowledge development in racquet sports. Separate course sections in sports such as badminton, racquetball, and tennis.
QA: HCP 106 HCP 107

108*. Team Sports
Fall, Spring, Summer. 10-3
R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108.
Skill and knowledge development in team sports. Separate course sections in sports such as basketball, ice hockey, lacrosse, soccer, softball, and volleyball.
QA: HCP 106

120. Personal Health
Fall, Spring, Summer. 3-0
Physical, mental, emotional, social, and spiritual domains of health. Alternative health values and behaviors. Developing healthy lifestyles.
QA: HCP 193

121. The Healthy Lifestyle
Fall, Spring, Summer. 3-2
Cardiovascular risk factors, lifestyle habits, and exercise capacities and their relationship to optimal health and longevity. Individual physical activity required as part of the course.
QA: HCP 270

125. First Aid and Personal Safety
Fall, Spring, Summer. 3-0
Knowledge and application of first aid concepts relating to encounters in the community and cardiopulmonary resuscitation. Caring for and avoiding safety hazards.
QA: HCP 125

Courses with an asterisk (*) have not been approved by the University Committee on Curriculum.