

elective requirements): Agricultural and Resource Economics 112; Food Science and Technology 101A, 101B, 108; Food Service Management 120, 120L, 122; Food Science and Technology 104, 104L. Students intending to apply for admission to a dietetic internship should contact the Advising office no later than the first quarter of the junior year for information on procedures.

Graduate Study. The Department of Nutrition offers programs of study and research leading to the M.S. and Ph.D. degrees in Nutrition. For information on graduate study contact the graduate adviser. See also [Graduate Studies](#), on page 97, in this catalog.

Obstetrics and Gynecology

See [Medicine, School of](#), on page 345.

Ophthalmology

See [Medicine, School of](#), on page 345.

Organizational Studies

See [Sociology](#), on page 442.

Orthopaedic Surgery

See [Medicine, School of](#), on page 345.

Otolaryngology

See [Medicine, School of](#), on page 345.

Parks and Recreation

See [Community and Regional Development](#), on page 177; [Design](#), on page 189; [Environmental Planning and Management \(under Environmental Horticulture\)](#), on page 258; [Landscape Architecture](#), on page 321; and [Physical Education](#), on page 406.

Pathology

See [Pathology \(PMD\)](#), on page 367; [Pathology, Microbiology, and Immunology](#), on page 403; and [Plant Pathology](#), on page 418.

Pathology, Microbiology, and Immunology

See [Veterinary Medicine, School of](#), on page 469.

Pediatrics

See [Medicine, School of](#), on page 345.

Pharmacology and Toxicology

See [Medical Pharmacology and Toxicology \(PHA\)](#), on page 364; [Molecular Biosciences \(VMB\)](#), on page 475; and [Pharmacology and Toxicology \(A Graduate Group\)](#), on page 403.

Pharmacology and Toxicology (A Graduate Group)

Alan R. Buckpiitt, Ph.D., Chairperson of the Group
Group Office. 4117 Meyer Hall (Department of Environmental Toxicology (530) 752-4516; <http://www.envtox.ucdavis.edu/ptx>)

Faculty. The 78 faculty in the graduate group are from more than 36 academic departments and organized research units within the College of Agricultural and Environmental Sciences, the School of Medicine and the School of Veterinary Medicine.

Graduate Study. The program of study and research leading to the Ph.D. degree emphasizes an interdisciplinary approach to graduate student training. Many specialty areas in pharmacology and toxicology are represented in the research interests of the faculty. Graduate students can study areas of pharmacology and toxicology which emphasize the effects of chemicals in the environment, on human health, and on ecosystems. Molecular and analytical approaches are used to study reproductive, genetic and developmental, respiratory and neurological systems, as well as metabolic fate and pharmacokinetics. Career opportunities include teaching in professional schools and hospitals, laboratory research in academia, government, industry, environmental control, and agricultural and drug regulatory agencies. For detailed information on the program, contact the Group office, appropriate graduate adviser, or the group chairperson.

Individual courses are taught under departments of faculty in the group, including Environmental Toxicology, Molecular and Biological Sciences, Animal Physiology, Veterinary Medicine, and the School of Medicine.

Graduate Advisers. A.R. Buckpiitt (*Molecular Biosciences*), J.A. Last (*Pulmonary Medicine*), M.G. Miller (*Environmental Toxicology*), K. Pinkerton (*Institute of Toxicology and Environmental Health*), R. Wu (*Pulmonary Medicine*)

Courses in Pharmacology and Toxicology (PTX)

Graduate Courses

201. Principles of Pharmacology and Toxicology I (5)

Lecture—5 hours. Prerequisite: Biological Sciences 102 and Neurobiology, Physiology, and Behavior 101. First of three courses presenting fundamental principles of pharmacology and toxicology. Introductory overview of basic concepts in pharmacology/toxicology, followed by in-depth blocks on fate processes of chemicals in the body, fate processes in tissue selective responses, selective toxicity employed therapeutically.—I. (I.)

202. Principles of Pharmacology and Toxicology II (4)

Lecture—4 hours. Prerequisite: course 201. The second of three courses presenting fundamental principles of pharmacology and toxicology. Principles of pharmacodynamics and mechanisms of drug/toxicant actions.—II. (II.)

203. Principles of Pharmacology and Toxicology III (4)

Lecture—4 hours. Prerequisite: courses 201 and 202. Integrated physiological systems, cardiovascular and nervous systems and how drugs and toxicants act to perturb function.—III. (III.)

230. Advanced Topics in Pharmacology and Toxicology (1-3)

Lecture/discussion/seminar—1 hour each (course format can vary at option of instructor). Prerequisite: course 201 and consent of instructor. In-depth coverage of selected topics for graduate students in Pharmacology-Toxicology and related disciplines. Topics determined by instructor in charge for each quarter.—I, II, III. (I, II, III.)

290. Seminar (1)

Current topics in pharmacology and toxicology. (S/U grading only.)—I, II, III. (I, II, III.)

299. Research (1-12)

(S/U grading only.)

Philosophy

(College of Letters and Science)

James R. Griesemer, Ph.D., Chairperson of the Department

Department Office. 1241 Social Sciences and Humanities Building (530) 752-0607; <http://philosophy.ucdavis.edu>

Faculty

Michael Glanzberg, Ph.D., Associate Professor
 James R. Griesemer, Ph.D., Professor
 Gerald Dworkin, Ph.D., Professor
 George J. Matthey II, Ph.D., Senior Lecturer
 Karen L. Neander, Ph.D., Professor
 Paul Teller, Ph.D., Professor
 Pekka Väyrynen, Ph.D., Assistant Professor

Emeriti Faculty

Henry Allison, Ph.D., Professor Emeritus
 Ronald A. Arbini, Ph.D., Professor Emeritus
 William H. Bossart, Ph.D., Professor Emeritus
 Robert C. Cummins, Ph.D., Professor Emeritus
 Joel I. Friedlander, Ph.D., Professor Emeritus
 Neal W. Gilbert, Ph.D., Professor Emeritus
 Marjorie Grene, Ph.D., Professor Emerita
 Michael Jubien, Ph.D., Professor Emeritus
 John F. Malcolm, Ph.D., Professor Emeritus
 Michael V. Wedin, Ph.D., Professor Emeritus
 George Wilson, Ph.D., Professor Emeritus

The Major Program

Philosophy addresses problems and questions that arise in all areas of human thought and experience and in all disciplines. Recurring questions about the nature of value, the good life, right conduct, knowledge, truth, language, mind, and reality are central

to philosophical study. Philosophy also investigates the methodologies and assumptions of the major disciplines in the university in order to deepen our understanding of the sciences, of mathematics, art, literature, and history, and of religion and morality. It leads us to address issues about the nature of these subjects, about the methods of reasoning characteristic of them, and about the contributions they make to our understanding of ourselves and our world.

Philosophy contributes to the liberal education of its students. The department emphasizes an analytic approach to philosophical questions, which trains students to understand and evaluate arguments and to think and write precisely and clearly. These skills are of immense value in a variety of careers.

The Program. The Department of Philosophy offers courses in such areas as the theory of knowledge, metaphysics, logic, ethics, and political philosophy. In addition, upper division courses are offered in moral and political philosophy, and aesthetics, and in the philosophy of religion, of mind, of language, of mathematics, of law, and of the physical, biological, and social sciences.

The problems of philosophy have important roots in past. The history of philosophy is important not only as part of the heritage of educated persons, but also because it is relevant to contemporary issues. For these reasons, the department places great emphasis on the history of philosophy, providing courses on the major figures and traditions of western philosophy.

Career Alternatives. Students of philosophy learn to understand and evaluate arguments and to think and write precisely and clearly. These analytical skills are assets in any career. Many of our majors have pursued graduate study in philosophy and have become philosophers in their own right. Others have pursued academic careers in related disciplines in the humanities and social sciences. Philosophy majors are well prepared for law, business, or other professional schools and have found careers in computer programming, government service, teaching, the ministry, and social work.

A.B. Major Requirements:

UNITS

Preparatory Subject Matter 16

One course from any three of the following areas 12

- (a) *General Philosophy:* Philosophy 1
- (b) *Ancient Philosophy:* Philosophy 21
- (c) *Early Modern Philosophy:* Philosophy 22N
- (d) *Philosophy of Mind:* Philosophy 13
- (e) *Ethics:* Philosophy 14, 15 or 24
- (f) *Philosophy of Science:* Philosophy 30, 31, 32 or 38
- (g) *Metaphysics:* Philosophy 101
- (h) *Theory of Knowledge:* Philosophy 102

Philosophy 12 4

Depth Subject Matter 36

Upper division units in Philosophy 36
 Note: Philosophy 101 and 102 may not be counted toward both preparatory and depth subject matter units.

Total Units for the Major 52

Major Adviser. G.J. Matthey

Advising Office. 1242 Social Science and Humanities

Minor Program Requirements:

Students wishing to minor in Philosophy may choose a general minor or a minor specializing in logic. There are no specific courses required for the general minor, so students may create a program to suit their own interests. The range of choice in the logic specialization is limited to the courses listed.

UNITS

Philosophy—General 20

Twenty upper division units in philosophy. Philosophy 12 may be substituted for four of the upper division units.

Philosophy—Logic..... 20

- Philosophy 12 or Mathematics 108 4
- Philosophy 112 4
- Select units from Philosophy 113, 131, 134, 135, 189K 12

Minor Adviser. G.J. Matthey

Honors Program. The department offers an honors program, which gives qualifying majors the opportunity to work closely with faculty and graduate students.

Courses for Non-Majors. Students majoring in most disciplines in the university will find courses relevant to their educational or career goals. Philosophy 1 is the introductory course for non-majors. Philosophy 5 teaches critical thinking. The following courses are recommended:

- (1) *Pre-law:* 12, 14, 24, 30, 102, 112, 115, 116, 118 and, especially, 119;
- (2) *Pre-medical:* 14, 30, 108, 114, 115, 116;
- (3) *Business:* 14, 102, 112, 114, 115, 116, 117, 118, 119;
- (4) *Social Policy:* 14, 24, 101, 102, 114, 115, 116, 117, 118, 119;
- (5) *Social Sciences:* 12, 30, 31, 32, 101, 102, 103, 109, 118, 131;
- (6) *Physical Sciences:* 12, 30, 31, 32, 101, 102, 106, 107, 112, 131;
- (7) *Biological Sciences:* 30, 31, 32, 101, 102, 108, 110;
- (8) *Humanities and the Arts:* 14, 21 through 24, 101, 102, 103, 105, 114, 116, 118, 123, 160 through 175;
- (9) *Agricultural and Environmental Science and Policy:* 5, 14, 24, 30, 31, 114, 115, 116, 118.

Department Activities. The Philosophy department sponsors a lecture-seminar series of well-known philosophers who present papers in their fields of expertise. The department also operates ongoing faculty and graduate student colloquia. Undergraduate students are welcome to attend and join these discussions. Information can be obtained in the Department office.

Graduate Study. The Department of Philosophy offers programs of study leading to the M.A. and Ph.D. degrees. Detailed information may be obtained by writing to the Graduate Adviser.

Graduate Adviser. K. Neander

Courses in Philosophy (PHI)

Lower Division Courses

1. Introduction to Philosophy (4)

Lecture—3 hours; discussion—1 hour. Problems of philosophy through major writings from various periods. Problems are drawn from political, aesthetic, religious, metaphysical, and epistemological concerns of philosophy. GE credit: ArtHum, Wrt.—I, II, III. (I, II, III.)

5. Critical Reasoning (4)

Lecture—3 hours; discussion—1 hour. Criteria of good reasoning in everyday life and in science. Topics to be covered may include basic principles of deduction and induction; fallacies in reasoning; techniques and aids to reasoning; principles of scientific investigation; aids to clarity. Not open to students who have completed course 6. GE credit: Wrt.

11. Philosophy East and West (4)

Lecture—3 hours; discussion—1 hour. Comparative treatment of select theories in Eastern and Western philosophy, e.g., of self, God, being, knowledge, enlightenment. Topics selected from the following philosophies: Eastern—Buddhist, Confucian, Hindu, Taoist; and Western—Platonist, Aristotelian, Medi-

eval Christian, Modern Rationalist/Empiricist, Kantian, Hegelian, Existentialist. GE credit: ArtHum, Div, Wrt.

12. Introduction to Symbolic Logic (4)

Lecture—3 hours; discussion—1 hour. Sentence logic syntax and semantics. Truth tables. Transcription between sentence logic and English. Logical equivalence. Validity. Proof techniques.—I. (I.) Teller

13. Minds, Brains, and Computers (4)

Lecture—3 hours; discussion—1 hour. Contemporary theories of the nature of the mind. The mind as a brain process and as a computer process. Ways in which neuroscience, artificial intelligence and psychology seek to understand the mind. Offered in alternate years. GE credit: SciEng or SocSci, Wrt.

14. Ethical and Social Problems in Contemporary Society (4)

Lecture—3 hours; discussion—1 hour. Philosophical issues and positions involved in contemporary moral and social problems. Possible topics include civil disobedience and revolution, racial and sex discrimination, environment, population control, technology and human values, sexual morality, freedom in society. GE credit: ArtHum, Div, Wrt.

15. Bioethics (4)

Lecture—3 hours; discussion—1 hour. Critical analysis of normative issues raised by contemporary medicine and biology. Possible topics include euthanasia, abortion, reproductive technologies, genetic engineering, practitioner/patient relationships, allocation of medical resources, experimentation on human subjects. GE credit: ArtHum, Wrt.—Dworkin

21. History of Philosophy: Ancient (4)

Lecture—3 hours; discussion—1 hour. Survey of Greek philosophy with special attention to the Pre-Socratics, Plato, and Aristotle. GE credit: ArtHum, Wrt.

22N. History of Philosophy: Early Modern (4)

Lecture—3 hours; discussion—1 hour. Survey of major figures in philosophy of the seventeenth and eighteenth centuries, with emphasis on Descartes, Hume, and Kant. Not open for credit to students who have completed former course 22 or 23. GE credit: ArtHum, Wrt.

24. Introduction to Ethics and Political Philosophy (4)

Lecture—3 hours; discussion—1 hour. Reading of historical and contemporary works highlighting central problems in ethical theory and political philosophy. Why should we be moral? What is moral behavior? What is justice, both for the individual and for society? Is there a right of rebellion? GE credit: ArtHum, Wrt.—Väyrynen

30. Introduction to Philosophy of Science (4)

Lecture—3 hours; discussion—1 hour. Basic problems in the philosophy of science, common to the physical, biological, and social sciences. Analysis of explanation, confirmation theory, observational and theoretical terms, the nature of theories, operationalism and behaviorism, realism, reduction. Not open for credit to students who have taken course 104. GE credit: ArtHum or SciEng, Wrt.—Teller

31. Appraising Scientific Reasoning (4)

Lecture—3 hours; discussion—1 hour. Introduction to scientific hypotheses and the kinds of reasoning used to justify such hypotheses. Emphasis on adequate justification, criteria, and strategies for distinguishing scientific from pseudoscientific theories. Concrete historical and contemporary cases. GE credit: ArtHum or SciEng.—Griesemer

32. Understanding Scientific Change (4)

Lecture—3 hours; discussion—1 hour. Concepts of scientific change in historical and philosophical perspective. Survey of models of growth of knowledge, 17th century to present. Relationship between logic of theories and theory choice. Kuhn's revolution model. Examples from various sciences. GE credit: ArtHum or SciEng, Wrt.—Griesemer

38. Introduction to Philosophy of Biology (4)

Lecture—3 hours; discussion—1 hour. Non-technical introduction to philosophical, social, and scientific ideas, methods and technologies in contemporary biological fields such as evolution, genetics, molecular biology, ecology, behavior. Philosophical consideration of determinism, reductionism, explanation, theory, modeling, observation, experimentation. Evaluation of scientific explanations of human nature. GE credit: ArtHum, Wrt.—Griesemer, Neander

98. Directed Group Study (1-5)

Prerequisite: consent of instructor. (P/NP grading only.)

99. Special Study for Undergraduates (1-5)

Prerequisite: consent of instructor. (P/NP grading only.)

Upper Division Courses

(Certain upper division courses may not be offered every year.)

101. Metaphysics (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: one course in philosophy recommended. Theories of being. Such topics as reality, substance, universals, space, time, causality, becoming, body, experience, persons, freedom, and determinism. Views of the nature and method of metaphysics. Anti-metaphysical arguments. GE credit: ArtHum, Wrt.

102. Theory of Knowledge (4)

Lecture—3 hours; extensive writing or discussion. Prerequisite: one course in philosophy. Analysis of the concept of knowledge. The relation between knowledge, belief and truth. Development of foundationalist, coherentist and externalist theories of justified belief. Examination of skepticism. GE credit: ArtHum, Wrt.—Mattey

103. Philosophy of Mind (4)

Lecture/discussion—3 hours; term paper. The relation between mind and body, our knowledge of other minds, and the explanation of mental acts. Discussion of such concepts as action, intention, and causation. GE credit: ArtHum, Wrt.—Neander

104. The Evolution of Mind (4)

Lecture/discussion—3 hours; term paper. Prerequisite: one previous Philosophy course or instructor permission. The interpretation of human thought and behavior through the lens of evolutionary theory. Topics include the nature/nurture debate concerning cognitive and other mental capacities and traits, and the interaction between evolution, learning and development. GE Credit: SocSci.

105. Philosophy of Religion (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: one course in philosophy recommended. Logical, metaphysical, epistemological, and existential aspects of selected religious concepts and problems. GE credit: ArtHum, Wrt.

107. Philosophy of the Physical Sciences (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: one philosophy course or a science background recommended. Nature of testability and confirmation of scientific hypotheses; nature of scientific laws, theories, explanations, and models. Problems of causality, determinism, induction, and probability; the structure of scientific revolutions. GE credit: ArtHum or SciEng, Wrt.—Teller

108. Philosophy of the Biological Sciences (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: one course in biology or one course in philosophy. Scientific method in biology. Nature of biological theories, explanations, and models. Problems of evolutionary theory, ecology, genetics, and sociobiology. Science and human values. GE credit: ArtHum or SciEng, Wrt.—Griesemer

109. Philosophy of the Social Sciences (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: one course in philosophy or a social science recommended. The nature of the social sciences, their subject matter and methods. Similarities to and

differences from natural and life sciences. Predicting and explaining human behavior. Behaviorism. Reduction, holism, and individualism. Related moral issues. The social sciences and philosophy. GE credit: ArtHum or SocSci, Wrt.—Neander, Teller

111. Philosophy of Space and Time (4)

Lecture/discussion—3 hours; term paper. Prerequisite: one upper division philosophy course. Philosophical problems of space and time. The philosophical implications of space-time theories, such as those of Newton and Einstein. Topics may include the nature of geometry, conventionalism, absolutist versus relationist views of space and time, philosophical impact of relativity theory.—Teller

112. Intermediate Symbolic Logic (4)

Lecture/discussion—4 hours. Prerequisite: course 12 or consent of instructor. Predicate logic syntax and semantics. Transcription between predicate logic and English. Proof techniques. Identity, functions, and definite descriptions. Introduction to concepts of metatheory.—II. (II.) Mattey

113. Advanced Logic (4)

Lecture/discussion—4 hours. Prerequisite: course 112 or Mathematics 108 or the equivalent. Topics will vary between metalogic of First-Order logic through the Completeness and Löwenheim-Skolem theorems; and Zermelo-Fraenkel set theory typically axiomatized as a First-Order theory. May be repeated once when subject area differs.

114. History of Ethics (4)

Lecture/discussion—4 hours. Prerequisite: one philosophy course. Study of some classic texts from the history of philosophical writing on central problems of ethics, taking the form either of a survey or concentrated examination of selected historical figures. Readings from such philosophers as Aristotle, Butler, Hume, Kant, Mill. GE credit: ArtHum, Wrt.

115. Problems in Normative Ethics (4)

Lecture/discussion—3 hours; term paper. Prerequisite: one course in philosophy. Moral philosophy studied through examination of moral problems and the moral principles and common sense intuitions that bear on them. Problems discussed may include: animal rights, fetal rights, euthanasia, justice and health care, war, nuclear deterrence, world hunger, environmental protection. GE credit: ArtHum, Wrt.

116. Ethical Theories (4)

Lecture/discussion—3 hours; term paper. Prerequisite: one course in philosophy; one course in ethics recommended. Study of fundamental concepts and problems in ethical theory through an examination of classical and contemporary philosophical theories of ethics. Among the theories that may be discussed are utilitarianism, virtue theory, theories of natural rights, Kantian ethical theory, and contractarianism.—Väyrynen

117. Foundations of Ethics (4)

Lecture/discussion—3 hours; term paper. Prerequisite: one of courses 114, 115, 116, 101, or 137. Advanced investigation of questions about the nature and foundations of morality. Among the topics that may be discussed are moral realism and anti-realism, cognitivism and non-cognitivism, types of relativism, moral skepticism, normative language and normative belief.

118. Political Philosophy (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: one course in philosophy. Intensive examination of some central concepts of political thought such as the state, sovereignty, rights, obligation, freedom, law, authority, and responsibility. GE credit: SocSci, Div, Wrt.

119. Philosophy of Law (4)

Lecture—3 hours; discussion—1 hour. Prerequisite: one course in philosophy or consent of instructor. Philosophical theories of the nature of law, legal obligation, the relation of law and morals. Problems for law involving liberty and justice: freedom of expression, privacy, rights, discrimination and fairness, responsibility, and punishment. GE credit: SocSci, Div, Wrt.

123. Aesthetics (4)

Lecture/discussion—3 hours; term paper. Prerequisite: one course in philosophy recommended. Nature of art, of artistic creation, of the work of art, and of aesthetic experience; nature and validity of criticism; relations of art to its environment. GE credit: ArtHum, Wrt.

125. Theory of Action (4)

Lecture—3 hours; extensive writing or discussion—1 hour. Prerequisite: one course in Philosophy. Survey of prominent contemporary approaches to leading problems in action theory. Problems include issues about the nature of intentional action and the conceptual character of explanations of actions in terms of the agent's reasons. Offered in alternate years. GE credit: ArtHum, Wrt.

127. Film Theory (4)

Lecture/discussion—3 hours; film viewing—3 hours. Prerequisite: Film Studies 1 or consent of instructor. Survey of the conceptual frameworks used to study film (including semiotics, psychoanalysis, spectatorship, auteur, genre and narrative theories). Historical survey of major film theorists. (Same course as Film Studies 127.) GE credit: ArtHum, Wrt.

128. Rationality (4)

Lecture/discussion—3 hours; extensive writing. Prerequisite: at least one course in philosophy. Philosophical issues concerning rationality in its various forms. Focus is on theoretical and practical reasoning and conditions for rational belief, choice, and action. Possible additional topics include rationality and human limitations; paradoxes of rationality; varieties of irrationality; rationality and objectivity.—Väyrynen

131. Philosophy of Logic and Mathematics (4)

Lecture/discussion—3 hours; term paper. Prerequisite: course 12 or one course for credit in mathematics. Nature of formal systems and mathematical theories. Selected topics include logical and semantic paradoxes; foundations of mathematics; set theory, type theory, and intuitionistic theory; philosophy of geometry; philosophical implications of Gödel's incompleteness results.

134. Modal Logic (4)

Lecture/discussion—4 hours. Prerequisite: course 112 or Mathematics 108 or the equivalent. Survey of the main systems of modal logic, including Lewis systems S4 and S5. "Possible worlds" semantics and formal proofs. Applications to epistemology, ethics, or temporality.—Mattey

135. Alternative Logics (4)

Lecture/discussion—4 hours. Prerequisite: course 12, Mathematics 108, or the equivalent. Alternatives to standard truth-functional logic, including many-valued logics, intuitionist logics, relevance logics, and non-monotonic logics.—Mattey

137. Philosophy of Language (4)

Lecture/discussion—3 hours; term paper. Prerequisite: one course in philosophy or linguistics. Discussion of philosophical theories of how languages work and philosophical problems arising from thinking about language. Emphasis on modern (1879–present) philosophical views on language.—Glanzberg

143. Hellenistic and Neo-Platonic Philosophy (4)

Lecture/discussion—4 hours. Prerequisite: course 21. Greek philosophy after Aristotle, including Epicureanism, Stoicism, Skepticism and Neo-Platonism. GE: ArtHum, Wrt.

145. Medieval Philosophy (4)

Lecture/discussion—3 hours; written reports. Prerequisite: course 21. Study of major philosophers in the medieval period. GE credit: ArtHum, Wrt.

151. Nineteenth Century European Philosophy (4)

Lecture/discussion—4 hours. Prerequisite: course 22N. Survey of the main movements in nineteenth century philosophy on the European continent. Idealism in Schopenhauer and Hegel, dialectical materi-

alism in Marx, irrationalism in Kierkegaard, Nietzsche and Dostoevsky. Not offered every year. GE credit: ArtHum.—Mattey

156. Contemporary Analytic Philosophy (4)

Lecture/discussion—3 hours; term paper. Prerequisite: one course in philosophy. Consideration of central issues such as meaning/reference, analytic/synthetic, reductionism, formal and ordinary language, essential properties, ontological commitment, possible world semantics; influential works by philosophers such as Russell, Moore, Wittgenstein, Austin, Carnap, Quine, Putnam, Kripke, van Fraassen.

157. Twentieth Century European Philosophy (4)

Lecture/discussion—4 hours. Prerequisite: one course in Philosophy. Survey of the main movements in twentieth century philosophy on the European continent, including phenomenology, existentialism, post-structuralism and post-modernism. Philosophers covered are Husserl, Heidegger, Sartre, Foucault, Derrida. GE credit: ArtHum.—Mattey

160. Pre-Socratics (4)

Lecture/discussion—3 hours; term paper. Prerequisite: course 21. Study of the metaphysical views of such pre-Socratic figures as the Milesians, the Pythagoreans, Heraclitus, Parmenides, Empedocles, Anaxagoras, and the atomists.—Wedin

161. Plato (4)

Lecture/discussion—3 hours; term paper. Prerequisite: course 21. Examines Plato's most important contributions in metaphysics, epistemology, psychology, cosmology, ethics and political philosophy. Dialogues will be selected from Plato's middle and later writings. Offered in alternate years.—Wedin

162. Aristotle (4)

Lecture/discussion—3 hours; term paper. Prerequisite: course 21. An overview of Aristotle's most central and influential writings. Topics selected from fields such as metaphysics, physics, ethics, logic, and psychology. Offered in alternate years.—Wedin

168. Descartes (4)

Lecture/discussion—4 hours. Prerequisite: course 22N. The philosophical writings of René Descartes. Topics include the refutation of skepticism, the nature and existence of mind and body, the existence of God, and the foundations of science. Not offered every year.—Mattey

170. Leibniz (4)

Lecture/discussion—4 hours. Prerequisite: course 22N. Survey of the philosophical writings of Gottfried Wilhelm Leibniz. Topics include Leibniz's logic, the existence of God, human freedom, substance, and the relation between science and metaphysics. Not offered every year.—Mattey

172. Locke and Berkeley (4)

Lecture/discussion—4 hours. Prerequisite: course 22N. Principal metaphysical works of John Locke and George Berkeley. Topics include abstract ideas, existence of matter, primary and secondary qualities, essence, substance, the existence of God, and the nature of scientific knowledge. May be repeated for credit. Not offered every year.

174. Hume (4)

Lecture/discussion—4 hours. Prerequisite: course 22N. David Hume's *Treatise of Human Nature* and related writings. Topics include empiricism, space, causality, belief, skepticism, the passions, and morality. Not offered every year.—Mattey

175. Kant (4)

Lecture/discussion—4 hours. Prerequisite: course 22N. Immanuel Kant's *Critique of Pure Reason* and related writings. Topics include the nature of human cognition, space and time, *a priori* concepts, substance, causality, human freedom, and the existence of God. Not offered every year.—Mattey

189A-K. Special Topics in Philosophy (4)

Lecture/discussion—3 hours; extensive writing. Prerequisite: one course in the area of the special topic. Special topics in (A) History of Philosophy, (B) Metaphysics, (C) Theory of Knowledge, (D) Ethics, (E) Political Philosophy, (F) Philosophy of Law, (G) Aesthetics, (H) Philosophy of Mind, (I) Philosophy of Sci-

ence, (J) Philosophy of Language, (K) Logic. May be repeated up to eight units of credit. Not offered every year.

194HA-194HB. Honors Research Project (4-4)

Tutoring—3 hours; term paper. Prerequisite: consent of instructor; open to students who are members of the honors program in Philosophy. Completion of honors research project under direction of an instructor. Consult departmental major adviser for list of instructors available in a given quarter.

198. Directed Group Study (1-5)

(P/NP grading only.)

199. Special Study for Advanced Undergraduates (1-5)

Prerequisite: consent of instructor.

(P/NP grading only.)

Graduate Courses

201. Metaphysics (4)

Seminar—3 hours; term paper. Prerequisite: graduate standing or consent of instructor. Topics vary from quarter to quarter and may include the following: What are things? Do names refer to things? If so, how? Do things have essential properties? What is the nature of necessity? May be repeated for credit when topic differs and with consent of instructor.

202. Theory of Knowledge (4)

Seminar—3 hours; term paper. Prerequisite: graduate standing in philosophy or consent of instructor. Topics vary from quarter to quarter. Sample topics include belief, skepticism, justification, externalism, naturalized epistemology. May be repeated for credit with consent of instructor.—Mattey

203. Philosophy of Mind (4)

Seminar—3 hours; term paper. Prerequisite: graduate standing or consent of instructor. Topics in the philosophy of mind such as the mind-body problem, mental representation, consciousness, intentionality. May be repeated for credit with consent of instructor.

203P. Philosophy of Mind Practicum (4)

Practicum—12 hours. Prerequisite: consent of instructor. Specific research conducted and prepared for publication by advanced students in a team setting. Topics include knowledge representation and learning in neural networks, the nature and formal properties of mental representation. May be repeated for credit when topic differs and with consent of instructor. (S/U grading only.)

207. Philosophy of Physics (4)

Seminar—3 hours; term paper. Prerequisite: graduate standing in Philosophy or consent of instructor. Intensive treatment of one (or more) topic(s) in the philosophy of physics, such as foundations of spacetime theories, the interpretation of quantum mechanics, or foundations of statistical mechanics. May be repeated for credit when topic differs and with consent of instructor.—Teller

208. Philosophy of Biology (4)

Seminar—3 hours; term paper. Prerequisite: graduate standing or consent of instructor. Intensive treatment of one (or more) topic(s) in the philosophy of biology, such as foundations of evolutionary theories, reductionism in biology, sociobiology and cultural evolution. May be repeated for credit when topic differs and with consent of instructor.—Griesemer

210. Philosophy of Science (4)

Seminar—3 hours; term paper. Prerequisite: graduate standing or consent of instructor. Treatment of one or more general topics of current interest in philosophy of science. Topics may include scientific explanation, theories of confirmation, scientific realism, reduction in physics and biology. May be repeated for credit when topic differs and with consent of instructor.—Teller

212. Philosophy of Logic and Mathematics (4)

Seminar—3 hours; term paper. Prerequisite: course 112 or 113 or Mathematics 108 or 125 or the equivalent. Philosophical issues in logic and math.

Topics may include nature of logical and mathematical truth or knowledge, correctness of logical systems, foundations of mathematics, metaphysical and epistemological presuppositions, applications to philosophical problems and formalization of philosophical theories. May be repeated for credit when topic differs and with consent of instructor.

214. Ethics (4)

Seminar—3 hours; term paper. Prerequisite: graduate standing in philosophy or consent of instructor. Topics may include morality and motivation, objectivity in ethics, the relationship between the factual and the moral. Topics vary from quarter to quarter. May be repeated for credit when topic differs and with consent of instructor.—Dworkin, Väyrynen

217. Political Philosophy (4)

Seminar—3 hours; term paper. Prerequisite: graduate standing or consent of instructor. Advanced studies in political philosophy. Topics vary but may include distributive justice, enforcement of morality by the state, equality, obligation to obey the law, social contract theory. May be repeated for credit when topic differs and with consent of instructor.—Dworkin

237. Philosophy of Language (4)

Seminar—3 hours; term paper. Prerequisite: graduate standing or consent of instructor. Study of philosophical issues raised by language, such as the nature of semantic content, proper semantics for verbs of propositional attitude, feasibility and limitations of formal semantics and pragmatics for natural languages. May be repeated for credit when topic differs and with consent of instructor.

261. Plato (4)

Seminar—3 hours; term paper. Prerequisite: graduate standing or consent of instructor. Advanced seminar designed for analysis of arguments, doctrines, and texts from Plato's works. Methods of argumentation and interpretation are especially stressed. Topics vary according to instructor. May be repeated for credit with consent of instructor.—Wedin

262. Aristotle (4)

Seminar—3 hours; term paper. Prerequisite: graduate standing or consent of instructor. Advanced seminar designed for analysis of arguments, doctrines, and texts from Aristotle's works. Methods of argumentation and interpretation are especially stressed. Topics vary according to instructor. May be repeated for credit with consent of instructor.—Wedin

275. Kant (4)

Seminar—3 hours; term paper. Prerequisite: graduate standing in philosophy or consent of instructor. Intensive study of a topic in the philosophy of Kant, in such areas as metaphysics, theory of knowledge, ethics. May be repeated for credit with consent of instructor.—Mattey

290. History of Philosophy (4)

Seminar—3 hours; term paper. Prerequisite: graduate standing or consent of instructor. Topics in the history of philosophy. Topics vary according to instructor from quarter to quarter. May be repeated for credit when topic differs and with consent of instructor.—Wedin, Mattey

298. Group Study (1-5)

299. Research (1-12)

(S/U grading only.)

Professional Course

396. Teaching Assistant Training Practicum (1-4)

Prerequisite: graduate standing. May be repeated for credit. (S/U grading only.)—I, II, III. (I, II, III.)

Physical Education

(College of Letters and Science)

Suzanne C. Williams, M.S., Program Director

Program Office. 264 Hickey Gymnasium
(530) 752-1111

Quarter Offered: I=Fall, II=Winter, III=Spring, IV=Summer; 2007-2008 offering in parentheses

General Education (GE) credit: ArtHum=Arts and Humanities; SciEng=Science and Engineering; SocSci=Social Sciences; Div=Social-Cultural Diversity; Wrt=Writing Experience