Note on Course Numbers

Each Carnegie Mellon course number begins with a two-digit prefix which designates the department offering the course (76-xxx courses are offered by the Department of English, etc.). Although each department maintains its own course numbering practices, typically the first digit after the prefix indicates the class level: xx-1xx courses are freshmen-level, xx-2xx courses are sophomore level, etc. xx-6xx courses may be either undergraduate senior-level or graduate-level, depending on the department. xx-7xx courses and higher are graduate-level. Please consult the Schedule of Classes (https://enr-apps.as.cmu.edu/open/SOC/SOCServlet) each semester for course offerings and for any necessary pre-requisites or co-requisites.

80-100 Introduction to Philosophy
All Semesters: 9 units
In this introductory course we will explore three major areas of Philosophy: Ethics, Metaphysics, and Epistemology. Accordingly the course is divided into three sections. In each section we will read primary sources and discuss some of the main philosophic problems associated with that area. These will include: moral problems (Ethics), problems rising from the debates about free-will, personal identity or intelligence (Metaphysics), and inquiries about the scope and limits of human knowledge (Epistemology). We will then introduce some theories designed to solve such problems, and try to understand the strengths and weaknesses of these theories. We will apply different techniques and theories to issues that we might encounter in the real world. We will use class discussions, homeworks and papers to learn skills for evaluating arguments. These skills include: how to present a philosophic argument, what are the assumptions that justify it, what are its weaknesses and its strengths, whether such weaknesses can be resolved and, if they cannot be resolved, why.

80-101 Freshman Seminar: Mathematical Context
Fall: 9 units
This course explores historical, scientific, and philosophical contexts in which mathematics is developed, and the ways in which mathematics enables us to obtain precise descriptions of various aspects of human experience. Topics include the development of non-Euclidean geometry and Riemann’s theories of manifolds with applications in cosmology, and the theory of computability with applications in cognitive psychology. Students will become familiar with fundamental set theoretic notions, as well as Turning machines and cellular automata.

80-102 Honors Program in Introduction to Philosophy
Fall and Spring: 3 units
This three credits extension of 80-100 is open to Freshmen and Sophomores by invitation of their instructor only. The seminar meetings examine interesting puzzles and open controversies concerning topics raised in 80-100.

80-109 Philosophy Freshman Seminar: Perspectives on Climate Change
Spring: 9 units
The earth’s climate has gone through many changes. Sorting through all the predictions and discussion about the changes in climate this generation will experience can be overwhelming. In this course we will look at questions about how to respond to climate change from several perspectives: history of the earth sciences, philosophy of science (what can we know?, how do we know?, what should we ask next?), and philosophical ethics. Answering such questions well relies in part on getting the facts straight, so we will also look at what scientists have to say on some relevant questions, such as: Has life on the earth ever recovered from a rapid catastrophic climatic event, and if so, how? What role do plants and animals, forests and deserts, oceans and marshlands play in creating and maintaining earth’s atmosphere? Then we will consider ethical issues, such as: What should we aim for: mitigation of climate change or adaptation to climate change --- or both? How much should the interests of future generations be valued in making decisions today, and what principles or considerations are relevant in deciding this? Is it still worth pursuing global cooperation, or should such efforts instead focus on more regionally oriented aims? Are there successful stories of responding to climate change, and if so, what morals can we draw from them?

80-110 Nature of Mathematical Reasoning
Intermittent: 9 units
This course focuses on understanding mathematical reasoning, not on mastering a particular mathematical theory like linear algebra or calculus. It explores instances of mathematical reasoning and rigorous argumentation, with examples from the history of science and mathematics. We consider the “Lets Make a Deal” puzzle, the counter-intuitive results of HIV testing, and how to assess the relative size of infinite sets, all problems which defy intuitive solution but which look simple after they are put in mathematical form. The course is designed for students at the freshman and sophomore levels who are not interested in a mathematically intense major.

80-130 Introduction to Ethics
Fall: 9 units
As an introductory course, we will seek to trace out the historical and philosophical dimensions of the polis from its origins in Ancient Greece to its current manifestation in present-day society. Special emphasis will be placed on the concept of “democracy.” The readings and lectures will focus on the history and concept of democracy (as an idea and as an institution); the basic concepts and problems of political philosophy (e.g., liberal and libertarian ideas of justice); and applied political philosophy (e.g., regional initiatives in deliberative democracy).

80-135 Introduction to Political Philosophy
Spring: 9 units
The course will consider ethical questions that arise regarding social structure and public policy’s impact on both people and the environment. It will consider the role of political institutions (and, sometimes, individuals) in dealing with some of the greatest challenges facing our generation: World poverty, environmental problems, and globalization. Some of the questions we will consider include: Are developed countries like ours obligated to ameliorate poverty by providing foreign aid, are they obligated to prevent environmental problems, and is globalization and free trade in particular a good idea? The course uses theory, case studies, and empirical evidence to consider these questions from a few different moral and political perspectives. We will extract some economic principles and rational dilemmas from examining these issues and pay attention to how legal and empirical considerations interact with ethical considerations.

80-150 Nature of Reason
Spring: 9 units
This course offers an intellectual history of philosophical views regarding the nature of human reasoning in mathematics and the sciences, from ancient to modern times. The first part of the course traces the search for deductive methods for obtaining certain knowledge, starting with Aristotle and Euclid, and continuing through the Middle Ages and late Renaissance thought, to the work of Boole and Frege in the nineteenth century. The second part of the course considers the history of skepticism about empirical knowledge, covering Plato, Sextus Empiricus, Descartes, Pascal, and Hume, along with replies to skepticism in the works of Bayes and Kant. The third part of the course discusses theories of the nature of mind, culminating in the computational conception of mind that underlies contemporary cognitive science.
80-180 Nature of Language  
Fall and Spring: 9 units  
Language is used to talk about the world or to describe it, but how do we go about describing language itself? Linguistics is the name given to the science of language, whose task it is to give such a description. The discipline of linguistics has developed novel tools for describing and analyzing language over the last two hundred years and in this course we learn what these tools are and practice applying them. Sub-areas of linguistics which we study include phonetics (the study of speech sounds), phonology (the study of sound systems), morphology (the study of parts of words), and syntax (the study of combinations of words). Beyond this, we look at changes in language over time, and we consider the puzzle of linguistic meaning. The methods of linguistics are useful in the study of particular languages and in the study of language generally, so this course is useful for students of foreign languages as well as those interested in going on to study language acquisition, psycholinguistics, sociolinguistics, philosophy of language, and computer modeling of language.

80-195 Research Training  
Fall and Spring: 9 units  
This course is part of a set of 100-level courses offered by H&SS departments as independent studies for students in the College. In general, these courses are designed to give students some real research experience through work on a faculty project or lab in ways that might stimulate and nurture subsequent interest in research participation. Faculty and students devise a personal and regularized meeting and task schedule. Each Research Training course is worth 9 units, which generally means a minimum for students of about 9 work-hours per week. These labs are offered only as electives; i.e., they cannot be applied toward a college or major requirement, although the units do count toward graduation as elective units. Additional details (including a roster and descriptions of Research Training Courses available in any given semester) are available in the H&SS Academic Advisory Center. For H&SS students only; only for second-semester freshmen, or first- or second-semester sophomores; minimum cumulative GPA of 3.0 (at the time of registration) required for approved entry; additional prerequisites (e.g., language proficiency) may arise out of the particular demands of the research project in question.

80-201 Epistemology  
Intermittent: 9 units  
Epistemology, one of the cornerstones of philosophy since ancient times, concerns the relationships between belief, truth, and knowledge. This course will explore fundamental issues in epistemology, such as the analysis of the concept of knowledge, epistemic justification and scientific method, a priori knowledge, theories of truth, skepticism, reliabilism, and coherentism. Both classic texts and contemporary journal articles will be discussed. There are no prerequisites, but students with some philosophical sophistication and/or formal ability will be more comfortable with the material.

80-208 Critical Thinking  
Intermittent: 9 units  
This course is an introduction to practical reasoning. The course will contain an elementary introduction to concepts important for reasoning and decision making, such as validity, probability, and utilities. Students will extensively practice critically analyzing and evaluating a wide variety of arguments found in newspapers, magazines, and elementary accounts of scientific reasoning. In order to help students develop the skills to analyze and evaluate arguments, the course will introduce several software packages recently developed at CMU that help students diagram arguments and causal reasoning; these packages have been shown to improve students critical reasoning skills. In addition, students will learn about a wide variety of statistical, logical, psychological, and causal fallacies that are used to mislead people.

80-210 Logic and Proofs  
All Semesters: 9 units  
This web-based course introduces students to central issues in logic and develops their ability for constructing and refuting arguments. It addresses the question: How can one analyze the structure of rational discourse or, more specifically, the logical structure of argumentation? An answer to this question requires: (i) uncovering the logical form of statements; (ii) defining the correctness of logical steps; (iii) formulating inference rules for the logical forms; (iv) designing strategies for argumentation with the inference rules. The course takes these steps for both sentential and quantificational logic. Presentation: The material is presented online, though some exercises must be done with pen and paper. Additional reading of historical and philosophical character complements the systematic on-line presentation. Weekly small discussion meetings with collaborative reviews, substantive discussions and critical reflections supplement the on-line material.

80-211 Logic and Mathematical Inquiry  
Intermittent: 9 units  
Since ancient times, those searching for truth have looked to mathematical arguments as a paradigm of rational inquiry. We study the structure of such arguments and their application. In the first half of the course, we develop the syntax and semantics of sentential and quantificational logic while in the second, we apply this logic to examine the axiomatic method in set theory and introduce formal models of computation. This course prepares students to take the 310-311 series on the fundamental (in)completeness and (un)decidability theorems of modern logic.

80-212 Arguments and Logical Analysis  
Summer: 9 units  
Are there rational methods that can further our knowledge? The notion of rational inquiry presupposes that there are appropriate methods for the pursuit of knowledge. In this course, we will investigate the means by which a successful argument justifies its conclusion, as well as various subtle ways in which other arguments fail. In the course of our inquiry, we will take a historically informed approach to studying logic and argumentative fallacies. We will also discover that these tools are useful for constructing and analyzing arguments in all disciplines from philosophy and history to psychology and physics. Our primary goal is to learn to use these tools to make our thinking and writing clearer, more precise, and more critical. To that end, our coursework will consist in homework and exams on topics in logic, as well as essays on a wide variety of topics. This course is intended for students from any discipline who would like to improve their writing and critical thinking skills.

80-213 Philosophy of Science  
Intermittent: 9 units  
In this course, we will examine some historical case studies (e.g., the Copernican revolution in astronomy) against which we will assess views pertaining to the significance, justification, and production of scientific knowledge. For example, should scientific theories be understood literally or as computational devices for deriving new predictions? How can universal conclusions ever be justified by a finite data set? Does explanation contribute to a theory's confirmation by the evidence? Does science aim to find the truth? Is probability in the world or only in our minds? Is explanation a matter of finding causes or are causes whatever it is that explains? Is scientific rationality objective or culture-relative?

80-214 Philosophy of Social Science  
Intermittent: 9 units  
This course will explore various philosophical issues germane to social science. The central question of the course asks whether we can use traditional scientific tools to understand social phenomena, e.g. wars and religions, in the same way that we use them to understand natural phenomena, e.g. gases, lasers and planetary orbits. Some of the more specific questions we address: Because humans possess free will and act with intentions while light rays and planets in motion do not, are we forced to use logically different species of explanations in the two cases? How can we explain social institutions that depend upon cooperation? Whereas natural scientists actively conduct experiments, social scientists can often only collect statistical data. Does this difference prevent social scientists from inferring causal relations? Is our understanding of social phenomena always value laden?

80-220 Measurement and Methodology  
Intermittent: 9 units  
This course is intended as an introduction to the theory of measurement. How are units chosen? Under what conditions do qualitative relationships determine quantitative ones? We shall investigate theories of extensive measurement, with and without error. Applications will be taken from the natural and social sciences. Prerequisites: None specifically; however, students should have background in elementary logic and be comfortable with taking mathematical approaches to conceptual problems.

80-223 Philosophy of Economics  
Intermittent: 9 units  
This course introduces students to central issues in economic analysis and develop their ability for constructing and refuting arguments. It addresses the question: How can one analyze the economic inquiry and decision making? An answer to this question requires: (i) uncovering the economic form of statements; (ii) defining the correctness of economic steps; (iii) formulating inference rules for the economic forms; (iv) designing strategies for argumentation with the inference rules. The course takes these steps for both sentential and quantificational economic logic. Presentation: The material is presented online, though some exercises must be done with pen and paper. Additional reading of historical and philosophical character complements the systematic on-line presentation. Weekly small discussion meetings with collaborative reviews, substantive discussions and critical reflections supplement the on-line material.
The aim of the course is to provide students with an introduction to environmental ethics. One aspect of environmental ethics is the study of values underlying human relations to the natural environment. In particular, we are interested in issues that arise when these values conflict. This course begins with a discussion of our current environment, and different approaches to solving these crises. Many of these solutions, however, depend on particular kinds of knowledge, particularly scientific knowledge, about our environment. Thus, another important aspect of environmental ethics is determining what we do, and what we can, know. To work through these issues, we will explore some problems in philosophy of science, with special emphasis on the various eco-sciences.
80-253 Continental Philosophy
Intermittent: 9 units
This course provides students with an overview of key historical and philosophical movements in European Philosophy. The cultural and historical background and for 20th Century Continental Philosophy covers Descartes, Kant, Kierkegaard, and Nietzsche (Hegel and Marx are also options). Early to mid-20th Century Continental Philosophy covers the central tenets of phenomenology and existentialism (e.g., intentionality, Being-in-the-World, Bad Faith). This part will involve selections from the works of, for example, Husserl, Heidegger, Sartre and Merleau-Ponty. Finally, cultural and philosophical trends such as Structuralism, Hermeneutics and Post-modernism (e.g., Derrida, Foucault, Lyotard and Habermas) will be addressed.

80-234 Analytic Philosophy
Intermittent: 9 units
We will read (parts of) some classic works in analytic philosophy by Gottlob Frege, Bertrand Russell, and Ludwig Wittgenstein and, if time permits, by Ayer and Quine. We will also historically situate these classic works with respect to each other, and with respect to a few select works in logic, science, and mathematics that provided the background to them. The emphasis will be on learning how to read, understand, articulate and critique the views and arguments in these texts.

80-255 Pragmatism
Intermittent: 9 units
American Pragmatism represents an energetic attempt to bridge the divergent cultures of science and the humanities. The movement's founder, C.S. Peirce, was trained in chemistry and worked as a physicist, but he was also deeply concerned with the contemporary philosophical portrayal of science, which distinguished sharply between theoretical knowledge and practice. Peirce responded by constructing a comprehensive philosophy emphasizing the scientific importance of community, fallibility, and action. Pragmatism was also developed and vigorously popularized by William James, who-aspired to be a painter and ended up as an acknowledged founder of modern empirical psychology. James extended Peirce's position by defending the role of values in even the purest of empirical sciences. John Dewey, who is also well-known for his role in education, interpreted science as an evolving social system and developed a theory of aesthetics based on what we now call the psychology of problem solving. The pragmatists made and continue to make lasting contributions to modern statistics, logic, and social science and their emphasis on community, fallibility, action, and value in science are still of primary importance in philosophy and in the ongoing dialogue between the scientific and humanistic cultures.

80-256 Modern Moral Philosophy
Intermittent: 9 units
This course will address some of the central aesthetic theories concerning the nature of our judgments of the beautiful and of the sublime that were developed around the 18th century. The famous divide between the British empiricist philosophers and the rationalists of the Continent regarding the sources of human knowledge, was paralleled in a debate regarding the nature of aesthetic judgments. In this course we will study the aesthetic theories of some of the most important figures of this period, with an emphasis on the work of Immanuel Kant.

80-257 Nietzsche
Intermittent: 9 units
During his life in the late 19th-century, Friedrich Nietzsche was a relatively obscure German philosopher. Since his death, however, he has become deeply influential and well-known, and was a source of inspiration for many important 20th-century thinkers. Despite this popularity, Nietzsche's philosophy remains relatively mysterious, and often misunderstood. Much of his writing consisted of aphorisms, rather than more traditional prose and arguments, and many of his positions seem to contradict one another. This course will cover a broad range of Nietzsche's writings, focusing on such central concepts as the will to power, eternal recurrence, and the oft-misunderstood Ubermensch ("overman"). Throughout, we will focus on developing a consistent interpretation of an enigmatic philosopher whose views have been mischaracterized and misappropriated throughout the past century.

80-258 Hume
Intermittent: 9 units
This course will investigate the philosophy of David Hume. We will focus on his philosophical thought expressed in the book A Treatise of Human Nature. Hume was an influential philosopher who wrote on many issues ranging from skepticism, to ethics, to the philosophy of science, and his views continue to be influential today. In this course we will attempt to understand Hume’s philosophy on all of these subjects both to better understand his contribution to the philosophy of his day, but also to see what his arguments can contribute to contemporary thought.

80-261 Empiricism and Rationalism
Intermittent: 9 units
A central issue in Western philosophy has been whether reason or experience (or some of both?) lies at the foundation of human knowledge, and the 17th and 18th centuries are a defining period of European history because they contribute the basic model of science and the ideals of intellect and political enlightenment that are still dominant today. Specifically, we will focus on the problems encountered in trying to give an adequate account of the nature of the external world, the structure of our minds, and the nature and limitations of knowledge in the thought of Descartes, Locke, Leibniz, Berkeley, and Hume. The course has two main goals: (1) to study the metaphysical and epistemological theories of selected philosophers, paying close attention to the arguments offered on behalf of often very strange positions, and (2) to help you improve your analytical and critical skills, including, for example, extracting and evaluating philosophical arguments.

80-262 Introduction to the Philosophy of Bertrand Russell
Intermittent: 9 units
Near the start of the 20th Century, Bertrand Russell helped to create what today we call "Analytic Philosophy." We will study Russell's contributions to this important approach to Philosophy by using his 1912 book, "The Problems of Philosophy" as a springboard to other readings. The issues we'll cover include several specific challenges in the Theory of Knowledge and Perception. For example, What is the difference between appearance and reality, and can we tell? Also, we'll consider issues that stem from reflecting on our thinking. For example, What constitutes a philosophical question?.

80-264 William James and Psychological Philosophy
Intermittent: 9 units
This course will be devoted to the reading and discussion of William James’ “Principles of Psychology”, including its relevance to foundational questions about current research. Though first published in 1891, the foundational issues addressed in this landmark work have not lost their relevance; it is often said that this work set the agendas for much of the research subsequently carried out in psychology. This course should appeal to anyone interested in philosophy of mind, philosophy of psychology, and philosophy of science.

80-270 Philosophy of Mind
Intermittent: 9 units
The mind poses one of the greatest challenges in our attempts to understand how the world works. In this course, we will explore a variety of fascinating topics that pose these challenges. We shall ask about how the mind relates to the material world, whether a definition of the mind or its various features can be given, whether having a mind makes a difference on the world. More specific topics will concern the relation between minds and computing, the nature of consciousness, and more concretely. Specifically: what is consciousness, what is it to be an agent, what is it to perceive?.

80-271 Philosophy and Psychology
Intermittent: 9 units
This course has two parts. First, we will look at basic concepts used in psychology (and cognitive science broadly) through the lens of philosophy including: representation, computation, information, explanation, modularity, attention, automaticity and control. Having some concrete proposals about these ideas will allow us to formulate psychological claims more concretely. Second, we will reverse course and look at traditional philosophical problems through the lens of psychology focusing on three topics: consciousness, agency, and perception. Specifically: what is consciousness, what is it to be an agent, what is it to perceive?.

80-275 Metaphysics
Intermittent: 9 units
The topical agenda of this course will vary. Typical topics include the problem of personal identity, the nature of human freedom, the nature of the self, the nature of reality and being, the nature of causality, and the question of whether solutions to such problems can be given. Classical as well as contemporary philosophic texts will be studied. For Spring 2011: Issues we will consider, in no particular order, include: Do properties exist? Why should you think there is an external world? What is a number? Why should you think other people have mental states? What are natural kinds? What constitutes the identity of things through time? What constitutes the identity of persons through time? What does determinism mean? Is there freedom of the will? What is possibility? What is necessity? Are there other possible worlds? When does one event cause another, and what does that mean? What could a deity be, and should you think there is one?
### 80-276 Philosophy of Religion
Intermittent: 9 units
In order to expand our ideas about what religion could be, the course begins with a brief cross-cultural review of some major religious traditions around the world. These turn to some more traditional arguments for and against theism, including the ontological, cosmological, and design arguments, the argument from religious experience, the argument from miracles and historical testimony, and the problem of evil. We will also consider whether morality ultimately depends on God's sanctions (yes, here it is at Carnegie Mellon) whether life would be meaningless if God did not exist.

### 80-280 Linguistic Analysis
Spring: 9 units
At one level, language is constituted by nothing but sounds, or marks on paper. How can such physical objects be used to create or transmit meaning? The answer assumed in this course is that objects with specific physical features are assigned symbolic or linguistic values on the basis of those features. Features of such objects (phonemes or graphemes), larger symbolic objects are created (morphemes). These larger objects have the special property that they can be associated in a consistent way with meanings. In a progressive fashion, words are built from morphemes, phrases from words, and sentences from phrases. The symbolic object of special importance in language is the sentence — this is the minimal object that encodes information. Sentences have different moods, and these moods correspond to their function with respect to the encoding and transmission of information. Indicative sentences carry information, interrogative sentences request information, imperative sentences command action, conditional and modal sentences present alternative possibilities, and so on. The goal of this course is to investigate the association of sound and meaning (or marks and meaning) in stages, beginning with the combinations of phonemes or graphemes into morphemes, and moving on to the construction of larger syntactic entities, ultimately sentences. Building on material taught in Nature of Language, formal theory in the areas of morphology, syntax, and semantics is introduced as we proceed, and as motivated by the linguistic forms under analysis. The endpoint involves the representation of meaning in language, and a consideration of what information is, such that it can be encoded in and transmitted by simple physical entities. Corequisite: 80-180.

### 80-283 Syntax and Discourse
Fall: 9 units
This course builds on and expands the basic syntactic analysis skills learned in 80-180 Nature of Language, and applies them to an exploration of the ways in which syntactic structure can be manipulated in different languages to reflect the status of content as old or new, foregrounded or backgrounded, connected to ongoing discourse or not. More generally, the course provides an examination of the interaction between syntactic structure and discourse structure, with reference to English and other languages. The course will begin with review of the basic syntax from Nature of Language (head/argument structure, constituency tests, complement/adjunct distinction) and will then develop this basic syntactic theory further, based on analysis of declarative sentences in English and one other language. We will then begin the analysis of manipulations of basic sentence structure such as fronting, left- and right- dislocation, cliticization and passivization, exploring in parallel the syntactic description of such structures and their semantic/pragmatic functions, using appropriate theoretical concepts. The course will provide students with tools to reason about and represent syntactic structure, and to accurately characterize the discourse-related properties of different sentence types. Prerequisite: 80-180
Prerequisite: 80-180.

### 80-291
Fall: 9 units
This course emphasizes the philosophical, cultural, and sociological aspects of multimedia. The course will explore these issues historically and thematically by looking at central figures in the early days of computing and communication theory (e.g., Alan Turing and Claude Shannon) and recent work by writers such as Brenda Laurel (Computers as Theatre), George Landow (HyperText 2.0), and Janet Murray (Hamlet on the Holodeck: The Future of Narrative in Cyberspace). This is not a technical course in issues relating to the creation of multimedia software. It is a course concerned with the meaning of multimedia authoring in its contemporary societial context.

### 80-305 Rational Choice
Fall: 9 units
This course will cover selected topics in rational choice theory, which informally is the analysis of how to make a correct decision in a given context. The course offers an introduction to the main normative theories of rational choice: von Neumann-Morgenstern theory of expected utility, Anscombe-Aumann’s account and Savage’s theory of choice under uncertainty. The course also includes an introduction to the main descriptive accounts of decision making used in Psychology and Economics. Possible topics may include, and are not limited to: a review of the main theories of non-expected utility and related issues in the psychology of judgment and decision making (especially recent advances extending Rank Dependent Utility and Prospect theory from risk to uncertainty), game-theoretic problems of conflict and coordination, the role of heuristics in choice behavior and strategic reasoning, as well as recent theories that abandon the Bayesian assumption that the decision maker’s beliefs can always be represented by a unique probability distribution. This course will stress the role that formal methods can play in the analysis of decisions and alternative applications of decision theory to issues in philosophy and social science.

Course Website: http://gregorywheeler.org/index2.html#courses

### 80-310 Formal Logic
Fall: 9 units
Among the most significant developments in modern logic is the formal analysis of the notions of provability and logical consequence for the logic of relations and quantification, known as first-order logic. These notions are related by the soundness and completeness theorems: a logical formula is provable if and only if it is true under every interpretation. This course provides a formal specification of the syntax and semantics of first-order logic and then proves the soundness and completeness theorems. Other topics may include: basic model theory, intuitionistic, modal, and higher-order logics.
Prerequisites: 15-251 or 80-210 or 80-212 or 80-211.
80-311 Undecidability and Incompleteness
Spring: 9 units
The course focuses on two central problems of mathematical logic: the undecidability of predicate logic (established by Church and Turing) and the incompleteness of formal theories (discovered by Gödel for theories that contain a modicum of set or number theory). The solutions of these problems involve the concept of computation that turned out to be fundamental for computer science, but also cognitive science. We first discuss predicative logic and systematic ways of constructing proofs; that is followed by the formal development of elementary set theory. The concept of Turing machine computation is introduced and shown to be equivalent to the concept of recursive function. That provides the mathematical, methodologically adequate tools for establishing the results mentioned above. The mathematical and computational notions and results are among the most significant contributions of logic, not just to the solution of internal logical questions and to the foundations of computer science, but also to (the beginnings of) a deeper understanding of the human mind and mental processes.
Prerequisites: 80-210 or 80-211 or 21-300 or 80-310 or 15-251.

80-312 Philosophy of Mathematics
Intermittent: 9 units
The 20th century witnessed remarkable and novel developments of mathematics - with deep roots in the 19th century. The beginnings of these developments were beset with foundational problems and provoked a variety of programmatic responses: logicism, intuitionism, and finitism. For a deeper study of basic issues, we review a part of classical Greek mathematics (the theory of proportions) that is closely connected to the foundations of analysis in the 19th century. We analyze set theoretic and constructive approaches, and discuss fundamental metamathematical results and their philosophical implications. A "reductive structuralist" position will finally provide a perspective for understanding the abstract character of mathematics as well as its usefulness in applications.
Prerequisites: 80-311 or 80-310 or 80-211.

80-313 Philosophical Logic
Intermittent: 9 units
A survey of the areas of logic that every philosophical logician must know, most philosophers should know, and any philosophy student may wish to know: modal logic, epistemic, dynamic, deontic, and temporal logics, intuitionistic logic, higher-order logic, constructive logic and type theory, relevance logic, conditional, Kripke semantics, Scott-Montague Semantics, probabilistic semantics and others. In various cases we will discuss recent work including unpublished papers and book drafts. We will consider both the formal details and the philosophical adequacy of the various surveyed formalisms. Prerequisites: 80-310 or equivalent.

80-314 Logic and Artificial Intelligence
Intermittent: 9 units
An introduction to several formalisms used in knowledge representation and database theory. The emphasis is placed on non-monotonic logic, conditional logic and belief revision methods. We will also study recent issues in the logics of knowledge and belief and consider applications in distributed AI. Several methodological problems in AI are discussed.

80-315 Modal Logic
Intermittent: 9 units
This course is an introduction to first-order modal logic. After a thorough grounding in propositional normal modal logic, which covers rudimentary modal model theory (invariance results, the relationship between modal and first-order logic, the finite model property, and notions of modal model equivalence), soundness, completeness, and basic decidability results, several interpretations and applications of normal modal logics are considered. Modal languages are simple languages for talking about relational structures, with several applications appearing in, philosophy, computer science, and linguistics. Some examples the course may touch upon include temporal and epistemic logics, multi-agent systems, finite game trees, labeled transition systems, among others. In the last part of the course we will consider extensions of the Kripke models to interpret first-order modal languages, and close with the more general still Scott-Montague models of "classical" modal logic and extend those to first-order modal languages.

Course Website: http://gregorywheeler.org/index2.html#courses

80-321 Causation, Law, and Social Policy
Intermittent: 9 units
Policy makers face causal questions. For example, does violence on TV cause violence in life, and if so, what policies can we institute that will actually curb it? Does the death penalty actually deter criminals? Do tough drug laws reduce drug use? This course investigates how scientists establish causal claims, and how policy makers and the courts rely on or systematically ignore such science. We examine what causal claims mean and how they connect to statistical data, and we discuss the limits of standard techniques for establishing causal claims. We will consider all of these issues first theoretically, and then in the context of several case studies chosen mostly by the students. Knowledge of social science and/or statistics is not required, but is desirable.
Prerequisite: 36-201.

80-322 Philosophy of Physics
Intermittent: 9 units
Philosophical problems in the development of modern physics. Topics include the philosophical significance of Einstein’s theory of relativity, interpretations of quantum mechanics, and the relationship between these two theories. Other topics may include the philosophy of space and time, the epistemology of geometry, the significance of modern cosmology, and chaos theory.

80-323 Philosophy of Biology
Intermittent: 9 units
This course will examine a range of foundational problems in evolutionary biology, as well as the implications of evolutionary biology for some basic topics in philosophy. Issues to be discussed include the meanings and roles of a variety of central concepts (such as species, fitness, function and adaptation) and controversies over adaptationism, genetic information, units of selection and the evolutionary explanation of human behavior. This course will be accessible both to philosophers interested in the epistemological and metaphysical status of evolutionary biology, and to biologists interested in better understanding the foundations of their field. Although there are no formal prerequisites for this course, students will be expected to have taken courses in either philosophy or biology.

80-324 Philosophy Economics
Intermittent: 9 units
The science of economics has come to occupy a central position in contemporary society – no other science gives rise to such heated emotion. Because of its central position in contemporary political rhetoric, economics becomes intertwined with a number of other philosophical issues surrounding justice, rights, and fairness. This course will look at foundational and philosophical questions that arise in the study of economics and application of economic theory to political problems. We will address issues like, the testability of economic claims, the use of “rationality” postulates in economics, the foundation of the right to property, the ability and inability of markets to solve social problems, and measuring the success or failure of an economy.

80-335 Deliberative Democracy: Theory and Practice
Spring: 9 units
This course will explore the theory and practice of deliberative democracy. Topics and concepts to be discussed include distinctions between aggregative and deliberative models of democracy, the notions of Reciprocity, Publicity, and Accountability as they apply to policy discussions, and recent work in Citizenship Theory. We will also look at various practices that utilize the theories of deliberative democracy, such as Participatory Strategic Planning, Deliberative Polls®, and Action Forums.

80-337 Philosophy Politics & Economics
Intermittent: 9 units
The course is split between two broad topics. First, we explore issues pertaining to Individual Decision Theory, mainly the postulate of rationality and its implications. We then proceed to discuss collective decision making by a group of rational agents. We discuss methods of aggregating individual preferences and, in particular, measures of social welfare, in an effort to associate the evaluation of policy with ethical principles.
80-341 Computers, Society and Ethics  
Intermittent: 9 units  
This course explores many of the social and ethical issues that have emerged in the wake of the significant advances that we have witnessed in computer science and information technology (IT). Computers and communications technologies have had an increasing impact on the whole of society and have raised new and difficult ethical questions. In turn, these ethical issues have spurred the need for a consideration of new policies and regulations. In this new world of IT, some are concerned about the protection of their privacy while others find problems of censorship and, more generally, restrictions on information access to be their main focus as a problematic social issue. This course will address these and other issues such as: questions of free speech, surveillance in the workplace, intellectual property and copyright, information acquisition and ethics and the Internet.

80-344 Management, Environment, and Ethics  
Intermittent: 9 units  
This course examines and poses answers to the following question: “What are the legitimate environmental responsibilities of organizational managers from the private, public and nonprofit sectors and how can they be best fulfilled?” This query will provide the course with its major theme and framework. But in order to do justice to it, three interrelated areas that are presupposed by this question will need to be explored first. These areas are: 1) applied ethics, 2) management ethics and 3) environmental ethics. The first half of the course will concentrate upon these three areas. The second half of the course will focus upon management and the environment employing the insights gained during the first half. Here students will review and evaluate past and current management practices with respect to the environment, organizational policies dealing with the environment and the role of government in the process of determining environmental responsibilities in management. Environmental concerns on the international level and their impact upon organizational management, the emergence of the “environmental affairs manager” within organizations, balancing environmental responsibilities with other management responsibilities and examples of management responses to the environmental crises will also be examined during this portion of the course.

80-348 Health Development and Human Rights  
Intermittent: 9 units  
Approximately 1.1 billion people live on less than $1 a day in a condition the World Bank refers to as extreme poverty. Those who live in extreme poverty frequently lack effective access to proper nutrition, adequate shelter, safe drinking water, and sanitation. As a result, they also bear the greatest burdens of famine and epidemic disease and frequently face social and political conditions of unrest and systematic oppression. This course examines the question of what, if anything, we in the technologically and economically developed world owe to the poor. It therefore raises considerable attention on competing theories of global distributive justice and the relationship between poverty, poor health, and human rights. We will critically examine different strategies for international development that emphasize one or more of these variables and we will consider how information about the complex interrelationship of these variables should be factored into the development process.

80-351 Kant  
Intermittent: 9 units

80-363 19th Century Foundations of Science  
Intermittent: 9 units  
To represent or “picture” aspects of the world through mathematical and other models was a distinctive way of looking at science in the late 19th century. It has important precedents and is again influential in contemporary discussions in philosophy of science that employ a model-based approach. We are going to examine scientific and mathematical developments in the 19th century and connect them to both classical as well as to contemporary philosophical work. Intellectual and popular scientific writings in Logic, Mathematics, Physics, and Psychology will be set in the context of the technology and culture of the era. Authors to be studied will include Boole, Jevons, Frege, Gauss, Dedekind, Hilbert, Poincare; Maxwell, Hertz, Boltzmann; Lotze, Peirce, James, Helmholtz.

80-365 Ramsey  
Intermittent: 9 units  
Frank Ramsey played a crucial intellectual role in the Cambridge of Russell, Moore, Wittgenstein and Keynes (just to mention some central figures of that exceptionally lively and creative atmosphere of Cambridge at the beginning of the past century). During his short life (he died in 1930 at the age of only 26) he made decisive contributions to epistemology, decision theory, philosophical and mathematical logic, philosophy of mathematics, materialism and philosophy of science. Just to mention an example, his paper “Truth and Probability” laid the foundations of the modern theory of subjective probability and also those of modern utility theory and decision theory. The entire core of Ramsey’s philosophical and scientific work consists of no more than 15 papers. But in all cases they are remarkable essays that changed the intellectual topics they touched. Moreover they all contain the same view of philosophy merging a sound portion of Moorean realism with Ramsey’s kind of pragmatist philosophy. The course reviews these central papers and its rich relations with the Cambridge philosophers of this time and the Vienna Circle. In addition it is remarkable that most of Ramsey’s views remain valid today almost a century after his death. So, the course considers as well the impact of Ramsey’s views in contemporary analytic philosophers and those influenced by early American pragmatism. The Ramsey Collection at the University of Pittsburgh comprises an almost complete collection of autograph material by Ramsey, roughly 1,500 autograph pages in all. I am doing some historical research on this material which I intend to incorporate as additional material for the course.

80-380 Philosophy of Language  
Intermittent: 9 units  
Philosophy of language involves the attempt to understand the nature of language and its relationship with speakers, their thoughts, and the world. As part of this attempt, philosophers have asked questions such as: What is language? How does language convey meaning? Is it language itself which determines meaning, or the intentions of speakers? What different kinds of meaning are there? Philosophers and linguists have also asked questions about the meanings and functions of particular linguistic forms, such as definite noun phrases, conditional sentences and words like “I” and “now.” In this course, we will read papers by many of the major figures of contemporary philosophy of language: Frege, Russell, Tarski, Davidson, Quine, Kaplan, Grice and others. The course will be run “seminar-style”: students will be expected to read papers for each class in preparation for class discussion, and will also be required to take turns presenting the papers in class. The course also has significant writing requirements. By the end of the course, students will be familiar with the central questions of this area of philosophy, with the type of argumentation used to address them, and with some of the solutions that have been proposed. Students enrolling in the course should have taken at least one other philosophy class in which they read papers from the philosophy literature. Prerequisites: 80-100 or 76-101.

80-381 Meaning in Language  
Fall: 9 units  
This course is an introduction to the study of meaning from a linguistic perspective. Linguists studying meaning need to be able to say what the meanings of sentences are, and to explain how those meanings are constructed from the meanings of sentence parts: words, morphemes and syntactic structure. In this course, we will focus on developing a vocabulary for talking about the truth conditional content of sentences; the part of meaning that has to do with representing the world as being a particular way. We’ll also investigate how particular words and constructions affect the appropriateness conditions of sentences in which they occur, that is, the conditions under which those sentences can be appropriately used in discourse. As we’ll see, many linguistic items affect sentence meaning in both of these ways simultaneously. The semantic contributions of a wide range of linguistic forms will be covered in the course. By the end of the semester, you will be able to state clearly what the difference is between the noun phrases “a dog” and “the dog”; you’ll understand the difference between the sentence “All dogs have tails” and the sentence “Dogs have tails”; and you’ll know why the sentence “John left yesterday” sounds fine but the sentence “John has left yesterday” doesn’t. You’ll know how to talk about the meanings of sentences with modals, like “John might have left”, and you’ll understand what the difference is between saying “JOHN didn’t see BILL” and saying “JOHN saw not BILL”, and a lot more. The course will develop precise ways of talking about meaning, it will not be particularly technical. (The amount of technical material to be introduced will be determined on the basis of the skills and interests of students.) Materials in the course will presuppose a basic knowledge of linguistic notions, as covered in 80-180 Nature of Language. Prerequisite: 80-180.
08-382 Linguistics of Germanic Languages
Intermittent: 9 units
This course we will look at phonology and syntax within a single language family, Germanic. The Germanic languages include English, Dutch, Frisian, German, Dutch, Frisian, Afrikaans, Yiddish, Icelandic and the Scandinavian languages, excluding Finnish. Similarities and differences in the sound systems of these closely related languages will be studied, and we will also look comparatively at various syntactic structures, including noun phrases, verb complements, main and relative clauses, as well as mood and modality. The approach is student-centered, with groups of students concentrating on topics in a few most-closely related languages. The course will provide an extended case-study for application of concepts and analytical strategies taught in Nature of Language, Phonetics and Phonology, Linguistic Analysis, and other relevant courses. The approach should also help bring out the relevance of diachronic factors in the synchronic study of language, with historical forms of English being open to investigation, as these often reflect patterns found in contemporary Germanic languages.
Prerequisite: 80-180.

08-383 Language in Use
Intermittent: 9 units
Why is it so hard to get computers to chat? The reason is that when we have an ordinary, casual conversation we do a great deal more than merely exchange information which is directly encoded in language. We also recognize what our interlocutors intend to accomplish with their utterances; we use and recognize utterances with indirect meanings, as well as metaphors, jokes and irony; we fill in incomplete or underspecified meanings; and we determine what kinds of responses are desired and appropriate. We do all of this in part on the basis of linguistic knowledge, but also making use of implicit reasoning about speaker plans and intentions, and relying on implicit assumptions about normal conversational behavior. In this course, we investigate language in use, taking the approach developed within the linguistic sub-field of pragmatics. We focus on three related issues: First, we look at how language is used to do things, studying both the traditional theory of speech acts and a more contemporary approach. Second, we look at expressions whose function is primarily interactional. Finally, and most extensively, we examine how speakers can successfully express meanings that go beyond what is encoded by the linguistic forms that they use. The course is open to students at the sophomore level and above.
Prerequisites: 80-100 or 80-180.

08-384 Linguistics of Turkic Languages
Intermittent: 9 units
In this course we will look at the phonology, morphology, syntax and writing systems of languages within a single language group, Turkic. Turkic languages are spoken across continental Asia and include such languages as Turkmen, Tatar, Kazakh, Kirghiz, and Uzbek. In this course we will concentrate especially on Turkish, Azerbaijani, and Yakut. We will look at the sound systems of these languages to discover how they are related, and we will compare these to similar systems within and syntactic structures. We will consider the impact of diachronic factors on the synchronic study of language, and we will also examine certain recent techniques used to establish genetic relations between languages. To a large extent the student-driven, and it can be seen as an extended case-study for applying concepts and analytical strategies taught in Nature of Language, Phonetics and Phonology, Linguistic Analysis, and other relevant courses. Prerequisites: 80180 Nature of Language
Prerequisite: 80-180.

08-405 Game Theory
Spring: 9 units
Game theory is the branch of decision theory in which decision problems interact. This course will cover those parts of game theory of special interest to social scientists and philosophers. We will discuss specific elements of the formal theory, including: the distinction between cooperative and non-cooperative games, games in the strategic and the extensive form, solution concepts, epistemic conditions needed to predict outcomes of games, equilibrium refinements, dynamical models of equilibrium selection, and folk theorems of indefinitely repeated games. We will discuss results in experimental economics that test some of the assumptions of classical game theory. Throughout the course we will examine applications of the formal concepts of game theory to problems in moral and political philosophy and the social sciences. Prerequisites: background either in decision theory, rational choice, probability, or statistics.

08-411 Proof Theory
Intermittent: 9 units
This course is an introduction to Hilbert-style proof theory, where the goal is to represent mathematical arguments using formal deductive systems, and study those systems and their properties in syntactic, constructive, computational, or otherwise explicit terms. In the first part of the course, we will study various types of deductive systems (axiomatic systems, natural deduction, and sequent calculi) for classical, intuitionistic, and minimal logic. We will prove Gentzen’s cut-elimination theorem, and use it to prove various theorems about first-order logic, including Herbrand’s theorem, the interpolation theorem, the conservativity of Skolem axioms, and the existence and disjunction properties for intuitionistic logic. In the second part of the course, we will use these tools to study formal systems of arithmetic, including primitive recursive arithmetic, Peano arithmetic, and subsystems of second-order arithmetic. In particular, we will try to understand how mathematics can be formalized in these theories, and what types of information can be extracted using metamathematical techniques.
Prerequisites: 80-311 or 80-310 or 21-300.

08-413 Category Theory
Intermittent: 9 units
Category theory is a formal framework devoted to studying the structural relationships between mathematical objects. Developed in the mid-20th century to attack geometrical problems, subsequent progress has revealed deep connections to algebra and logic, as well as to mathematical physics and computer science. The course emphasizes two perspectives. On one hand, we develop the basic theory of categories, regarded as mathematical structures in their own right. At the same time, we will consider the application of these results to concrete examples from logic and algebra.

08-430 Ethics and Medical Research
Intermittent: 9 units
Ethics & Medical Research: This course covers foundational issues in the ethical evaluation and regulation of research involving human subjects. It begins with a historical overview of the origins of research ethics after World War II as a response to high profile cases of abuse or scandal. This unit covers “classic cases” including the Tuskegee syphilis study, the Willowbrook hepatitis study, the Jewish Chronic Disease Hospital Case, and others. It also covers seminal documents such as the Nuremberg Code, the Belmont Report, and the current federal regulations known as the Common Rule. Against this historical backdrop, the course then examines foundational philosophical issues in human-subjects research including ethical issues in clinical trial design, the concept of equipoise and the use of placebo controls, the requirements of justice in the research context, and the values of privacy and informed consent.

08-447 Global Justice
Intermittent: 9 units
Until recently, the dominant view of international relations among both academics and politicians was that governments and citizens of one country have no moral or legal obligations to anyone beyond their own borders. The later half of the 20th century has seen a dramatic change in this attitude, with a much greater willingness to recognize that demands of justice may transcend national borders and bind different states and their people. This course examines this shift through the lenses of history, philosophy, law, politics, and anthropology. It is being offered in conjunction with the 2009-2010 Humanities Center Colloquium Series on “Global Connections, Global Responsibilities.” Topics covered include: theories of justice; sovereignty; the universality of human rights; global inequality and poverty; trade and labor in the global economy; climate change; humanitarian intervention and just war; post-conflict reconciliation and social reconstruction; as well as the emergence of transnational modes of governance. In addition to several short writing assignments, students will have the opportunity to carry out a research project on a relevant topic of their choice.

08-449 EHPP Project Course
Fall: 12 units
The Ethics, History and Public Policy Project Course is required for the Ethics, History and Public Policy major and is taken in the fall semester of the senior year. In this capstone course, Ethics, History and Public Policy majors carry out a collaborative research project that examines their people. This course examines this shift through the lenses of history, philosophy, law, politics, and anthropology. It is being offered in conjunction with the 2009-2010 Humanities Center Colloquium Series on “Global Connections, Global Responsibilities.” Topics covered include: theories of justice; sovereignty; the universality of human rights; global inequality and poverty; trade and labor in the global economy; climate change; humanitarian intervention and just war; post-conflict reconciliation and social reconstruction; as well as the emergence of transnational modes of governance. In addition to several short writing assignments, students will have the opportunity to carry out a research project on a relevant topic of their choice.

08-511 Thesis Seminar
Intermittent: 9 units
This course provides a forum for the presentation and detailed discussion of research done by students, be they undergraduates working on their Senior Thesis or graduate students engaged with their M.S. thesis.
80-513 Seminar on Mathematical Understanding and Cognition  
Intermittent: 9 units  
Algebra and number theory in the nineteenth century Jeremy Avigad (Carnegie Mellon) and Ken Manders (University of Pittsburgh) (This seminar is listed jointly between the two universities). A number of questions regarding the types of equations that can be solved in the integers and in the reals have their origins in antiquity, when mathematics was held to be the science of quantity, both continuous (magnitude) and discrete (number). The beginning of the nineteenth century brought striking advances along these lines. For example, Gauss gave a detailed analysis of the integers that can be represented by a given quadratic form, and Abel and Galois showed that the general quintic equation has no solution by radicals. A good deal of effort in the nineteenth century was devoted to making sense of these results, and by the end of the century the ideas had been recast in algebraic structural terms. Galois theory and the study of quadratic forms are now invariably presented in terms of field extensions and their properties. This shift is prototypical of the transition to the "modern" view of mathematics. In this seminar, we will trace the development of these ideas. We will focus, as much as possible, on the original sources, with an eye towards obtaining a better understanding of the methodological considerations that drove these developments.

80-514 Categorical Logic Seminar  
Intermittent: 9 units  
This course focuses on applications of category theory in logic and computer science. A leading idea is functorial semantics, according to which a model of a logical theory is a set-valued functor on a category determined by the theory. This gives rise to a syntax-invariant notion of a theory and introduces many algebraic methods into logic, leading naturally to the universal and other general models that distinguish functorial from classical semantics. Such categorical models occur, for example, in denotational semantics. e.g. treating the lambda-calculus via the theory of Cartesian closed categories. Similarly, higher-order logic is treated categorically by the theory of topos. Note: this course will begin with a 3 week refresher of basic category theory - CS students can start after immigration by reviewing on their own. Prerequisite: 80-413.

80-515 Seminar on the Foundations of Statistics  
9 units  
This coming Spring's Foundations of Statistics seminar (36-835 / 80-815) will focus on a recent translation/publication of de Finetti's lectures from 1979, "Philosophical Lectures on Probability." In these last lectures, de Finetti offers his reasons for, and statement of the subjective interpretation of probability, for which he is so well known.

80-516 Seminar on Causation  
Fall  
This course explores the foundations of causation. It examines how causal claims connect to both probability and to counterfactuals. Under a variety of background assumptions, and a variety of senses of "reliable", we will examine which causal inferences can be made reliably. We will also examine recent developments in statistics and artificial intelligence relating to causal inference.

80-520 Seminar on Philosophy Science  
Intermittent: 9 units  
Seminar on Philosophy of Science: Evolutionary Game Theory and Applications Evolutionary game theory (EGT) represents one potential foundational theory which grounds traditional game theory models. EGT relaxes the "high rationality" assumptions of traditional game theory in favor of conceptually diverse individuals as subject to evolution by natural selection or some form of trial and error learning. EGT provides a justification for many of the traditional concepts in game theory, but also highlights potential problems with this theory. This course will provide an overview of evolutionary game theory, and then will investigate two applications of that theory. The first application is the explanation of prosocial behaviors including cooperation, fairness, and altruism. The second application is to the emergence of linguistic behaviors, especially in non-social behaviors including cooperation, fairness, and altruism. The second focus, the class goals include understanding how Bayesian decision theory differs from its rivals, and understanding where Savages position is located within the current Bayesian program. Other seminal thinkers whose writings have served as the course’s focus in different terms include, R.A.Fisher, Harold Jeffreys, J.Neyman, and A. Wald. Prerequisites: This is primarily a graduate level class. Instructor permission is required for undergraduates.

80-522 Seminar on the Foundation of Statistics  
Fall: 9 units  
The seminar focuses on some single important foundational work, or body of work, and investigates it and related research from a contemporary point of view. For example, when Savage’s Foundations of Statistics is the course’s focus, the class goals include understanding how Bayesian decision theory differs from its rivals, and understanding where Savages position is located within the current Bayesian program. Other seminal thinkers whose writings have served as the course’s focus in different terms include, R.A.Fisher, Harold Jeffreys, J.Neyman, and A. Wald. Prerequisites: This is primarily a graduate level class. Instructor permission is required for undergraduates.

80-530 Seminar on Ethical Theory  
Fall  
To be determined.

80-575 Seminar on Metaphysics  
Intermittent  
We will begin, appropriately, with readings from Plato and from Aristotle’s Metaphysics, which motivate the fundamental questions of metaphysics. With this classical background, we will turn to a range of exemplary contemporary articles concerning such traditional metaphysical questions as the nature of existence, necessity, and causation, the persistence of objects through time, and personal identity. This is an advanced undergraduate class.

80-580 Seminar on the Philosophy of Language  
Seminar on the Philosophy of Language: The Construction of Meaning. The prevailing standard model of linguistic interpretation traces back to the work of Paul Grice. On Grice’s model, the interpretation of a linguistic utterance is a two stage process. First, an interpreter calculates the meaning of the sentence uttered on the basis of the conventional meanings of the words and syntactic constructions used. The output of this compositional process is assumed to be a proposition. Then, the interpreter proceeds to make inferences, based on this proposition and other contextual information, as to what the speaker meant. Crucially, this process (a) treats the truth conditional content of sentences as compositionally determinable on the basis of purely linguistic information and (b) clearly separates the contribution of semantic processes and pragmatic (inferential) ones. This standard picture has been critiqued from a variety of perspectives, and there is an ongoing debate surrounding the theory of the construction of meaning. Some philosophers and linguists have argued that inferential processes indeed do contribute to the determination of truth conditional content, or “what is said.” Others defend some version of the standard view, and have provided a variety of responses to critiques. Both kinds of view come in different degrees, ranging from extreme contextualists to those who deny that naive intuitions about utterance interpretation provide insight into the actual meanings of sentences. In this seminar, we will read the literature in which this debate has been and is being carried out. Readings will primarily be drawn from the philosophical and linguistic literature, with some forays into psycholinguistics and computational linguistics.

80-595 Senior Thesis  
Fall and Spring

80-830 Seminar on Ethical Theory  
Fall  
To be determined.

80-850 TBA  
Fall  
To be determined.