The History of Logic

Preliminary Course Description

This is a survey course at the graduate level in the history of logic.

The first 2/3 of the course will cover pre-nineteenth century logic, with a special emphasis on its relevance to the philosophy of language. Of necessity it will also be closely related to metaphysics and the philosophy of mind because for long periods ontology was little more than the effort to provide a semantics for the languages studied in logic and mental life, at least that part that consisted of rational thought, was studied as part of logic. Accordingly, the course will cover the history not only of central logical ideas like syntax, truth and logical entailment, but also that of reference meaning, and intentionality – all concepts forged in logic. Central figures will include Aristotle, the Stoics, Boethius, Proclus, Ockham, Buridan, Suarez, Arnauld (*The Port Royal Logic*), Malebranche, and Leibniz. It should be noted that much of what is interesting in medieval philosophy – and most of its secondary literature for the last generation – falls under logic.

The last third of the course will be a historical introduction to key concepts in modern philosophy of logic. Because the course is a survey of central concepts, there will not be time to work through the details of major proofs in metalogic. Concepts covered will include transfinite sets, logicism, consistency, satisfiability, completeness and incompleteness, compactness, recursive function (algorithm), decidability, axiom vs. natural deduction system, many-valued and intentional logic. Figures will include Cantor, Frege, Russell, Gödel, Skolem, Lukasiewicz, Church, and Montague.

A course in symbolic logic is a prerequisite, and in the first few weeks of the course students will be expected to master basic naïve set theory – its notation, vocabulary, and simple proof formats. This material will be covered in class, with exercises. Naïve set theory is necessary because it is the lingua franca of the logical literature, even that in the history of logic, and the secondary literature is inaccessible without it.

The relative emphasis on the various topic can be shaped by the special interests of the students in the course. For the instructors “take” on much of the material consult the historical papers at <http://homepages.uc.edu/~martinj/Papers/>

This course will fall in both the history and logic/language distribution areas.