An introduction to the meta-theory of first-order languages. The proof theory and model-theoretic semantics for a standard formal language will be developed. The course will include proofs of the completeness, compactness, and Löwenheim-Skolem theorems. The purpose of the course is to provide an introduction to mathematical logic, and to provide some of the logical background presupposed by many contemporary philosophical authors. Occasionally, issues in the philosophy of logic will be raised. There will be a midterm exam, a final exam, and several quizzes over homework exercises. Prerequisite: Philosophy 2500 or equivalent.