Text: Bergman, Moor. *The Logic Book*,

Logic has been called the depth grammar of rationality. Logic lies somewhere between grammar and algebra. Formal logic begins with the translation of English sentences into a rigorous pattern to expose their structure more clearly. Logic has been called the science of the Laws of Thought, but this is misleading insofar as it is not a description of how people actually think (pursued by psychology and anthropology, and including free association and confusions of various sorts), but a normative or evaluative study (like ethics) of how we ought to think in order to think correctly.

Symbolic logic proceeds within a mathematical notation and can be treated as the simplest branch of mathematics. Study of logic helps one be clearer about one’s own thought. It also introduces the notion of rigorous proof. Logic has application to computer science (as computers are based on Boolean algebra, which is equivalent to propositional logic). Logic also has applications to linguistics. The presuppositions of logics lead one into philosophy and the formal structure of what exists (metaphysics).

**FORMAT AND STRUCTURE OF THE COURSE**

1.) There will be regular 50-minute lecture-discussion on the MWF schedule.
2.) There will be daily homework that will be counted 40%
3.) At the end of each of the four sections of the course there will be a 50-minute in class test held in the lecture room. Each of these will count 15% of the grade. There will be no cumulative final exam. The test on the fourth section of the course will be given in the scheduled common final exam time and room.

This course satisfies the Discovery Quantitative Reasoning (QR) Category.