

# PHILO 275 Symbolic Logic:

Professor Daniel Addison – Spring 2016

We all reason, sometimes well, sometimes badly, but almost always without being self-conscious. This course aims to teach people to be self-conscious about certain aspects of their reasoning. The course will concentrate on elementary reasoning involving the so-called **Boolean** operators such as *and*, *or*, *not*, and *if-then*, and the so-called **quantifiers** such as *all* and *some*. We will not treat **probabilistic** reasoning, but only reasoning in which there is a claim that the conclusion follows with dead certainty. Various methods will be developed in order to test or establish such claims, e.g., the so-called methods of *truth tables* and *natural deduction*.

At the same time, learning about these methods will develop students' skills in *abstract* reasoning; reasoning about concepts and (simple) *theoretical* ideas. Logic is a theory of reasoning, and in learning it, students will get a feel for how theories work. This theory is a spectacular creative discovery. It provides a way to obtain a deep understanding of reasoning by simplifying actual reasoning processes in just the right way.

The textbook for the course is Virginia Klenk, *Understanding Symbolic Logic*, 5<sup>th</sup> Edition (2007), Prentice Hall.