

PHIL 150

Elementary Logic I Visiting Professor

M/W

9:30 – 10:50

University 122



Formal Studies Distros

This course introduces the concepts and principles of deductive logic. Deductive logic is the systematic study of why some arguments are valid (Janet studies and eats ice cream logically implies that Janet eats ice cream) while others aren't (Janet went to the movies or the opera does not logically imply Janet went to the opera). Modern deductive logic is built upon the idea that understanding this distinction requires us to construct and investigate formal languages that mirror the structure of natural languages such as English. Within the context of formal languages, we will learn two ways of modeling the distinction between valid and invalid arguments, the semantic method and the proof-theoretic method. We will conclude the class by asking how learning these formal techniques can make us better at everyday reasoning tasks.

Students will learn three skills: (i) symbolizing English language sentences and arguments in terms of formalized languages, (ii) semantic techniques, such as truth-tables, to check logical validity and logical equivalence (iii) proof techniques to check for the same properties.