# PHI 1310 Logic

A Tentative Course syllabus

Teacher: Prof. Wong Kai-yee H03-04, T05
TCW 201

## Course Content*

### I. Introduction

- Reasoning, inference, and argument
- Deduction and induction
- Truth, validity, and soundness
- The value of formal logic

### II. Propositional Logic

- The formal language PL
- Truth-functionality, sequent, and validity
- Natural deduction
- Truth-trees
- Proving invalidity

### III. Predicate Logic

- The formal language of QL
- Names, predication and quantification
- Relations and identity
- Proof-construction in QL
- Trees for QL
- Existence and descriptions
- Polyadic QL and the undecidability of first order logic

### IV. Induction

- Distinguishing induction and deduction
- Types of inductive arguments
- Inductive probability

### V. Fallacies and Informal Logic

- Informal logic and pragmatics
- Formal fallacies
- Informal fallacies

*subject to change in details

## Assessment:

The grading of the course will be based on the following:

- Tutorials participation and assignments
- A number of quizzes

## Bibliography:


1. Irving Copi & Carl Cohen, *Introduction to Logic*, 11th ed., Prentice Hall, 1998
2. Richard Jeffrey, *Formal Logic*, 2nd ed., McGraw-Hill, 1989.
3. Paul Tomassi, *Logic*, Routledge, 1999.
4. Greg Restall, *Logic: An Introduction*, Routledge, 2006.
5. Wesley Salmon, *Logic*, Prentice Hall, 1963.
6. Jerry Cederblom and David W. Paulsen, *Critical Reasoning*, 3rd ed., Wadsworth, 1991.
7. Jaako Hintikka and James Bachman, *What If…?: Toward Excellence in Reasoning*, Mayfield, 1991.
8. Peter Strawson, *Introduction to Logical Theory*, Methuen, 1952.
9. Paul Tidman and Howard Kahane, *Logic and Philosophy*, 8th ed., Wadsworth, 1999.
10. Douglas N. Walton, *Informal Logic*, Cambridge University Press, 1989.
11. 李天命: 李天命的思考藝術, 明報出版社有限公司, 1999.
12. 李天命: 《哲道行者》, 香港 : 明報出版社有限公司, 2005.