Course Code: PHI 2202
Course Title: Symbolic Logic
Teacher: Kou Kei-chun M07-08; W06
UCA 103

Course description

This is an intermediate-level course in formal logic. The core of this course is to present the formal system construction of propositional and predicate logic. Four main styles of formal systems will be discussed:

(a) Natural deduction,
(b) Axiomatic proofs,
(c) Semantic tableaux, and,
(d) Sequent calculi.

The main objectives of this course are:

(a) To enrich and upgrade the treatment of propositional and predicate calculi students have learnt from the introductory course.
(b) To present various formal systems of propositional and predicate logic.
(c) To examine the application of formal logic to the analysis of natural language arguments.
(d) To study important metatheorems of first-order logic.

Assessment

1. Tutorial participation and class discussion
2. Homework
3. Midterm and final exam

Main references

D. Bostock, *Intermediate Logic*, Oxford University Press, 1997.

H. Delong, *A Profile of Mathematical Logic*, Dover, 1970.

D. Jacquette, *Symbolic Logic*, Wadsworth, 2001.

M. Copi, *Symbolic Logic*, 5th ed., Prentice Hall, 1979.

R. C. Jeffrey, *Formal Logic: Its Scope and Limits*, McGraw-Hill, 1967.

G. Hamilton, *Logic for Mathematicians*, Cambridge University Press, 1978.

M. Sainsbury, *Logical Forms: An Introduction to Philosophical Logic*, 2nd ed., Blackwell, 1991.

R. Carnap, *Introduction to Symbolic Logic and Its Applications*, Dover, 1958.

W. V. O. Quine, *Mathematical Logic*, Harvard University Press, 1951.