PHIL1310 Logic 邏輯
Course Outline

Time：	**M 14:30-16:15**	**Location**：	**SC L2**
	Tutorial time to be arranged		

Course overview

This course is an introduction to elementary logic, focusing primarily on the syntax, semantics, and proof theory. Some elementary metatheorems of logic will also be covered. The main objective of this course is to develop students' ability to analyze and critically evaluate arguments from a logical point of view. Students will learn the logical principles of deductive and inductive inferences and the techniques of applying them for determining the validity of arguments.

Learning outcomes

1. Acquire analytic skills and a critical disposition.

2. Grasp the central concepts in classical logic.

3. Demonstrate familiarity with major proof-theoretic methods in propositional and predicate logic.

4. Translate arguments in ordinary language into symbolic argument forms.

5. Recognize common valid argument forms.

6. Identify, classify, and assess arguments in various contexts.

7. Identify and analyze informal fallacies.

Topics

1. Logic and Method of Philosophy
2. Basic Concepts
3. Informal Fallacies
4. Categorical Syllogisms
5. Symbolic Language and Truth Table
6. Natural Deduction in Propositional Logic
7. Natural Deduction in Predicate Logic

Learning activities

In-class:

1. Lecture: 2 hours each week.

2. Interactive tutorial: one 2-hour session every two weeks. Students are required to discuss reading material

assigned and do exercises on the following topics:

Topic of tutorial 1: Validity and Soundness;

Topic of tutorial 2: 10 Different Kinds of Informal Fallacies;

Topic of tutorial 3: Syllogisms and Venn Diagrams;

Topic of tutorial 4: Truth Table;

Topic of tutorial 5: Propositional Logic and Constructing Formal Proofs;

Topic of tutorial 6: Predicate Logic and Constructing Formal Proofs.

Out-of-class:

1. Reading: 3–4 hours each week on lecture material and 2 hours on tutorial material.

2. Homework: 2 hours each week.

Weeks 1–3: textbook Ex1.2–Ex1.4 (Basic Concepts);

Weeks 4–5: textbook Ex3.2–Ex3.4 (Informal Fallacies);

Week 6: textbook Ex4.1–Ex4.7 (Categorical Propositions);

Weeks 7–8: textbook Ex5.2–Ex5.5 (Categorical Syllogisms);

Week 9: textbook Ex6.1–Ex6.3 (Symbolic Language and Truth Table);

Weeks 10–11: textbook Ex7.1–Ex7.4 (Natural Deduction in Propositional Logic);

Weeks 12–13: textbook Ex8.1–Ex8.3 (Natural Deduction in Predicate Logic).

Assessment scheme

Task nature	Description	Weight
Two exams: mid-term and final	Each exam is worth 35%	70%
Class participation	Class discussion	10%
Tutorial	Discussion and participation	20%

Recommended learning resources

1. Patrick Hurley, A Concise Introduction to Logic, 10th ed., Wadsworth, 2006. (Textbook)

2. Irving Copi and Carl Cohen, Introduction to Logic, 11th ed., Prentice Hall, 1998.

3. Merrie Bergmann and James Moore, The Logic Book, 4th ed., McGraw-Hill, 1998.

4. Alec Fisher, The Logic of Real Arguments, Cambridge University Press, 1988.

5. Douglas N. Walton, The New Dialectic: Conversational Contexts of Argument, University of Toronto Press, 1988.

6. Douglas N. Walton, Informal Logic, Cambridge University Press, 1989.

7. Trudy Govier, A Practical Study of Argument, 5th ed., Wadsworth Thomson Learning, 2001.

8. Wayne Grennan, Informal Logic: Issues and Techniques, McGill-Queen's University Press, 1997.

9. Richard Jeffrey, Formal Logic, 2nd ed., McGraw-Hill, 1989.

10. Wesley Salmon, Logic, Prentice Hall, 1963.

11. Peter Strawson, Introduction to Logical Theory, Methuen, 1952.

12. 林正弘，《邏輯》，三民書局，1994。

13. 李天命，《李天命的思考藝術》，明報出版社有限公司，1999。

Course schedule

Week	Topics	Required reading	Tutorials	Remarks
1	Logic and Method of Philosophy	Textbook pp. 1–24		
2–3	Basic Concepts	Textbook pp. 32–60		
3			Tutorial #1	
4–5	Informal Fallacies	Textbook pp. 113–164		
5			Tutorial #2	
6–8	Categorical Syllogisms	Textbook pp. 189–276		
7			Tutorial #3	
9	Symbolic Language and Truth Table	Textbook pp. 300–379		
9			Tutorial #4	
10–11	Natural Deduction in Propositional Logic	Textbook pp. 350–385		
11			Tutorial #5	
12–13	Natural Deduction in Predicate Logic	Textbook pp. 406–425		
13			Tutorial #6	

Details of course website

We use CUForum for this course. Lecture notes and information on tutorial assignments and examinations will be posted on the website.

Feedback for evaluation

1. Students are strongly encouraged to provide feedback on the course via email or meetings with professor or tutors.

2. As with all courses in Philosophy Department, students evaluate the course through a survey and written comments at the end of the term as well as via regular feedback between teacher, tutors, and students. This information is highly valued and is used to revise teaching methods, tasks, and content.

Contact details for teacher(s) or TA(s)

Teacher	
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