The Chinese University of Hong Kong
Department of Philosophy
UGED1111G Logic 邏輯
Course Outline

Lecturer: Dr. Arthur C. S. CHIN   Email: arthurchin2@yahoo.com.hk

Lecture time: Thur 10:30-12:15   Venue: NAH 11

Instruction language: Chinese / English

Course Overview

This course aims to develop students' ability to identify, analyze and evaluate arguments in a clear and logical manner. It will introduce to students important concepts in logic such as validity, logical implication, and fallacy. Principles of deductive and inductive reasoning will be explained, and a range of examples will be employed to illustrate how such principles may be applied. Through extensive case studies, in-class discussions and problem sets, students will come to acquire not only the requisite theoretical knowledge but also the appropriate disposition to think analytically and critically.

Learning Outcomes

1) Understanding the central concepts and principles in classical logic.
2) Having the ability to identify, interpret, and critically assess arguments in different spheres of life.
3) Having the ability to identify the various forms of argument and assess their validity.
4) Understanding the basic rules of the formal system of propositional logic, and having the ability to translate arguments in ordinary language into corresponding symbolic forms, and to construct proofs within that system.
5) Having the ability to identify and explain common fallacies.

Topics

1) Ordinary Language and Meaning Analysis
2) Argument Identification
3) Deductive Reasoning and Basic Concepts in Logic
4) Propositional Logic: Formal Language, Table Method, and Natural Deduction
5) Inductive Reasoning
6) Fallacy

Course Schedule and Readings

- Readings marked with "*" are primary readings.

Week	Date	Topic	Remark
1	1/9	**Introduction** Key concepts: (i) logic (formal and informal); (ii) argument identification and evaluation <u>Readings</u> - Lau (2011): Chapter 1 "Introduction"	
2	1/16	**Ordinary Language and Meaning Analysis** Key concepts: (i) vagueness, ambiguity and incomplete meaning of ordinary language; (ii) linguistic pitfalls: unsubstantial meaning, conceptual confusion and vacuity <u>Readings</u> - *Lau (2011): Chapter 5 "Linguistic Pitfalls" - 貝剛毅 (2014): 第一篇 意義分析 第一至四章	
3	1/23	**Argument Identification** Key concepts: (i) argument; (ii) techniques in argument identification; (iii) basic techniques in evaluating an argument <u>Readings</u> - *Lau (2011): Chapter 8 "Identifying Arguments" - Hurley (2015): Section 1.2 in Chapter 1 "Basic Concepts" (pp.14-33)	
4	1/30	-	CNY Holiday
5	2/6	**Deductive Reasoning and Basic Concepts in Logic Part 1** Key concepts: (i) Deduction and induction; (ii) validity and soundness; (iii) logical consistency; (iv) logical equivalence; (v) argument form <u>Readings</u> - *Lau (2011): Chapter 9 "Valid and Sound Argument" - Hurley (2015): Sections 1.3 and 1.4 in Chapter 1 "Basic Concepts" (pp.33-52)	
6	2/13	**Deductive Reasoning and Basic Concepts in Logic Part 2** <u>Readings</u> - Same as Deductive Reasoning Part 1	

7	2/20	**Propositional Logic (PL) Part 1** Key concepts: (i) syntactic rules of PL; (iii) logical connectives (conjunction, disjunction, material conditional, negation, and bi-conditional) and truth-tables; (iv) translating arguments in natural language into PL; (vi) testing validity of PL arguments by the truth table method; (vii) natural deduction in PL Readings • *Hurley (2015): Chapter 6 "Propositional Logic"	
8	2/27	**Midterm Exam**	1st Exam
9	3/5	**Propositional Logic (PL) Part 2** Readings • Same as Propositional Logic Part 1	
10	3/12	**Propositional Logic (PL) Part 3** Key concept: (i) PL natural deduction Readings • Hurley (2015): Chapter 7 "Natural Deduction in Propositional Logic"	
11	3/19	**Inductive Reasoning Part 1** Key concepts: (i) inductive argument and defeasibility; (ii) strength, cogency, and the requirement of total evidence; (iii) common types of inductive argument and their evaluation Readings • *Lau (2011): Chapter 10 "Inductive Reasoning" (excluding 10.4); Chapter 17 "Statistics and Probability"; Chapter 21 "Analogical Reasoning" • 貝剛毅 (2014): 第四篇 歸納法 (12 至 15 章)	
12	3/26	**Inductive Reasoning Part 2** Readings • Same as Inductive Reasoning Part 1 "	
13	4/2	--	Reading Week
14	4/9	**Fallacy** Key concepts: (i) fallacy of inconsistency; (ii) fallacy of irrelevance; (iii) fallacy of insufficiency; (iv) fallacy of inappropriate presupposition Readings • *Lau (2011): Chapter 19 "Fallacy"	

		Hurley (2015): Sections 3.1-3.4 in Chapter 3 "Informal Fallacies"	
15	4/16	**Final Exam**	2nd Exam

Learning Resources

1. Copi, Irving & Cohen, Carl & McMahon, Kenneth (2014). *Introduction to Logic* (14th ed., International Edition). Upper Saddle River, NJ: Pearson Education.
2. Goldfarb, Warren (2003). *Deductive Logic*. Indianapolis: Hackett Pub. Co.
3. **Lau, Joe Y. F. (2011).** *An Introduction to Critical Thinking and Creativity: Think More, Think Better*. **Hoboken, N.J: Wiley**
4. Hausman, Alan & Kahane, Howard & Tidman, Paul (2010). *Logic and Philosophy* (11th ed.). Boston, MA: Thomson Wadsworth/Cengage Learning.
5. Hurley, Patrick (2015). *A Concise Introduction to Logic* (12th ed.). Australia ; Stamford, Ct.: Cengage Learning.
6. Priest, Graham (2000). *Logic: A Very Short Introduction*. Oxford: Oxford University Press.
7. Schick, Theodore & Vaughn, Lewis (2014). *How to Think about Weird Things* (7th ed.). New York: McGraw-Hill Companies, Inc.
8. 貝剛毅，2014，思方導航（第四版），匯智出版

- Full text of Lau (2011) accessible through CU Library.
- Selected chapters from Hurley (2015) will be uploaded onto Blackboard in due course.

Learning Activities and Workload

- Lecture (2 hours each week)
- Reading for each topic
- Problem Sets (NOT part of course assessment)

Assessment Scheme

Task	Description	Weight
Participation	In-Class Discussion	10%
Midterm Exam	In-class exam (2/24)	40%
Final Exam	In-class exam (4/6)	50%

- Format of Midterm and Final Exam: T/F questions, MC, and short questions.
- Questions may be in Chinese or English only.

Details of Course Website

We use Blackboard for this course. Lecture notes and other information concerning problem sets and exams will be announced on the course website in due course.

Feedback for Evaluation

Students are strongly encouraged to provide feedback on the course via email or meetings with lecturer. Students evaluate the course through a survey and written comments at the end of the term

as well as via regular feedback between teacher and students. This information is highly valued and is used to revise teaching methods, tasks, and content.

Academic Honesty and Plagiarism

Attention is drawn to University policy and regulations on honesty in academic work, and to the disciplinary guidelines and procedures applicable to breaches of such policy and regulations. Details may be found at http://www.cuhk.edu.hk/policy/academichonesty/ .

With each assignment, students are required to submit a signed declaration (attachment 1) that they are aware of these policies, regulations, guidelines and procedures. For group projects, all students of the same group should be asked to sign the declaration.

For assignments in the form of a computer-generated document that is principally text-based and submitted via **VeriGuide**, the statement, in the form of a receipt, will be issued by the system upon students' uploading of the soft copy of the assignment. Assignments without the receipt will not be graded by teachers. Only the final version of the assignment should be submitted via VeriGuide.