# The Chinese University of Hong Kong Department of Philosophy

# UGED1111B Logic 邏輯

# **Course Outline**

## **Course Overview**

This course is designed to develop the student's ability to analyze and critically evaluate arguments from a logical point of view. It will provide students with a basic understanding of such concepts as reasons, implication, validity, and fallacies. Students will learn the logical principles of deductive and inductive inferences and the techniques of applying them for determining the validity of arguments. Elements of good reasoning from an informal perspective will also be covered.

# **Learning Outcomes**

- 1. Acquire analytic skills and a critical disposition.
- 2. Grasp the central concepts in classical logic.
- 3. Demonstrate familiarity with major model-theoretic and proof-theoretic methods in propositional 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. Basic Linguistic Concepts
- 2. Basic Logical Concepts
- 3. Deductive Logic: Propositional Logic (Translation, Truth-table Method, Natural Deduction)
- 4. Deductive Logic: Predicate Logic (Translation)
- 5. Inductive Logic: Ordinary Inductive Reasoning
- 6. Informal Logic: Fallacies

## Course Schedule

Course Schedule					
Week	Date	Topic	Reading		
1	6/9	Introduction	Lau (2011): Chapter 1, pp.1-9		
2	13/9	Basic Linguistic Concepts &	貝剛毅 (2014): 第二章,pp.6-17 貝剛毅 (2014): 第二篇,pp.41-59 Copi (2014): Chapter 1, pp.1-33		
3	20/9				
4	27/9	Basic Logical Concepts			
5	4/10	Propositional Logic	Hausman (2010): Chapter 2-3, pp.19-85		
6	11/10				
7	18/10				
8	25/10	Midterm Exam			
9	1/11	Predicate Logic	Hausman (2010): Chapter 7-10, pp.167-190		
10	8/11	Fallacies	貝剛毅 (2014): 第五篇,pp.167-225		
11	15/11	ranacies			
12	22/11	Ordinary Inductive Reasoning	貝剛毅 (2014): 第四篇,pp.113-153		
13	29/11		Final Exam		

## Recommended Learning Resources

# Formal Logic

- 1. \* Hausman, Alan & Kahane, Howard & Tidman, Paul (2010). Logic and Philosophy (11th ed.). Boston, MA: Thomson Wadsworth/Cengage learning.
- 2. Copi, Irving & Cohen, Carl & McMahon, Kenneth (2014). *Introduction to Logic* (14th ed., International Edition). Upper Saddle River, NJ: Pearson Education.
- 3. Priest, Graham (2001). Logic: A Very Short Introduction. Oxford.

- 4. Hurley, Patrick (2015). A Concise Introduction to Logic (12th ed.). Australia; Stamford, Ct.: Cengage Learning.
- 5. Causey, Robert (2006). Logic, Sets, and Recursion (2nd ed.). Jones and Bartlett Publishers.
- 6. Gensler, Harry J. (2010). Introduction to Logic (2nd ed.). New York: Routledge.

#### Informal Logic

- Schick, Theodore & Vaughn, Lewis (2014). How to Think about Weird Things (7th ed.). New York: McGraw-Hill Companies, Inc.
- 8. Douglas, Walton (2008). Informal Logic (2nd ed.). Cambridge University Press.
- 9. Moore, Brooke & Parker, Richard (2012). Critical Thinking (10th ed.). New York: McGraw-Hill.
- 10. Govier, Trudy (2010). A Practical Study of Argument (7th ed.). Wadsworth Publishing.

# Thinking and Creativity

- 11. \*Lau, Joe Y. F. (2011). An Introduction to Critical Thinking and Creativity: Think More, Think Better. Hoboken, N.J.: Wiley.
- 12. Weston, Anthony (2009). A Rulebook for Arguments (4th ed.). Indianapolis: Hackett Pub.
- 13. Kahneman, Daniel (2011). Thinking Fast and Slow. New York: Farrar, Straus and Giroux.
- 14. Papineau, David (2012). Philosophical Devices: Proofs, Probabilities, Possibilities, and Sets. Oxford University Press.
- 15. \*貝剛毅,2014,思方導航(第四版),匯智出版
- 16. 李天命,1993,語理分析的思考方法,鵝湖月刊雜誌社
- 17. 李天命,2006,李天命的思考藝術(終定本),明報出版社
- 18. 李天命,2009,哲道行者(最終定本),明報出版社
- 19. 魯爾夫杜伯里,2012,思考的藝術(王榮輝譯),商周出版

# Learning Activities and Workload

- 1. Two hours lecture each week
- 2. Two examinations
- 3. A group assignment on a specific topic

#### Assessment Scheme

Task Nature	Description	Weight
Class Participation	Class discussion	10%
Mid-term Exam	In class midterm exam	35%
Final Exam	In class final exam	40%
Written Assignment	Group assignment	15%

# **Details of Course Website**

We use Blackboard Learn 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 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.

# **Contact Details**

Lecturer		
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## 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 <a href="http://www.cuhk.edu.hk/policy/academichonesty/">http://www.cuhk.edu.hk/policy/academichonesty/</a>

With each assignment, students will be required to submit a signed declaration 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.