# Critical Thinking 批判思考 (UGED1810B) 2013/14 second term

Lecture Hours	: Thursday 2:30 pm - 4:15 pm
Classroom	: UCC C1
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# A FEW IMPORTANT PRELIMINARY REMARKS

- 1. Students must read this outline carefully before registering to take this course so as to consider if it suits you, as well as during the course so as to get a clear direction of study.
- 2. Registered students must visit *Blackboard* regularly for updated information (e.g. the final version of the course outline, lecture material, etc.) and announcements of the course.
- 3. This course is taught in Cantonese but the lecture material and the examination will be in English. Technical terms in the lectures will be accompanied by Chinese translations and there are also Chinese works in the reference list.

# **COURSE OVERVIEW**

This course aims to provide a basic training in critical reasoning as a methodological foundation of independent thinking. Our capability to think is undoubtedly a unique and precious human characteristic. Although the capability itself is born, to utilise it properly must be acquired. Students will learn how to extract, construct, and evaluate arguments; how to identify common fallacies and to reflect on how the use of language influences thought; and how to think critically about issues in both real life situation and theoretical arguments which they commonly encounter in the course of their studies.

# **LEARNING OUTCOMES**

By attending the course, students are expected

- 1. to identify and explain the basic concepts, principles and other essential elements in meaning and truth analysis——the use of language and its influences on thinking;
- 2. to identify and explain the basic concepts, principles and other essential elements in argument examination—argument identification, classification and assessment;

- 3. to employ these concepts and principles in identifying a good argument, and if the argument is not a good one, to explain which part goes wrong—fallacy analysis;
- 4. to employ these concepts and principles in a systematic manner so as to construct arguments from problem-solving and decision-making examples and assess the goodness of such arguments.

LEARNING ACTIVITIES include mainly lectures, and also film shows, in-class group discussions and exams.

# **COURSE SYLLABUS**

- 1. Introduction
  - \* what critical thinking is and why it is important
- 2. To think in a proper way (I): some basic techniques this section relates chiefly to Learning Outcomes 1 and 2
  - \* the basic parts of an argument (論證)
  - \* two kinds of truth and their respective characteristics
  - \* arguments go wrong: fallacies (謬誤)
  - \* how pitfalls of language is involved in fallacies: ambiguity, vagueness, distortion, etc.
  - \* aim for clarity and precision: definitions

3. To think in a proper way (II): arguments and knowledge

- this section relates chiefly to Learning Outcomes 2 and 3
- \* two common forms of argument: induction (歸納法) and deduction (演繹法)
- \* to assess the goodness of induction: inductive force and "high" probability
- \* to assess the goodness of deduction: validity (有效) and soundness (對確)
- \* the traditional analysis of knowledge: justification, truth and belief (IF TIME ALLOWS)
- 4. The ultimate goal of critical thinking: argument analysis this section relates chiefly to Learning Outcome 4, which in fact serves as a consolidation of Outcomes 1, 2 and 3

\* the application of aforesaid techniques in constructing and analyzing real life arguments particularly in the field of problem-solving and decision-making

#### **COURSE SCHEDULE**

Date	Topic/Activities	Learning Outcome
Jan 9	Introduction	
Jan 16	Fallacies and Language I	1, 2
Jan 23	Fallacies and Language II	1, 2
Jan 30	No class (Lunar New Year Holiday)	
Feb 6	Review on Fallacies and Language	1, 2
Feb 13	Truth Analysis	1, 2
Feb 20	Induction I	2, 3
Feb 27	Induction II	2, 3
March 6	Induction III, Deduction I	2, 3
March 13	Deduction II	2, 3
March 20	MID-TERM EXAM (See Assessment Below) with lecture after the exam	1, 2, 3
March 27	(to be confirmed and announced on Blackboard)	
April 3	Essay Analysis Demonstration I	4
April 10	Essay Analysis Demonstration II Knowledge I (IF TIME ALLOWS)	3, 4
April 17	Knowledge II (IF TIME ALLOWS) Conclusion	3, 4

### **GENERAL REFERENCES**

The following is a PRELIMINARY listing of books you may wish to consult throughout the course. And all of them are available in our library. I must emphasize that they are NOT textbooks for this course. And more specific readings of chapter length will be assigned during the lectures and such instructions will be available on *Blackboard*.

Weston, A. (2009) Rulebook for Arguments, 4th/edn, Hackett Publishing Company. (early

editions are also acceptable)

This one is non-technical and really short (under 100 pages) and I highly recommend it. While the next one is also short but targets more advanced readers.

Priest, G. (2001) Logic: A Very Short Introduction, New York: Oxford University Press.

You may also consult the followings that contain more detailed explanations, examples and exercises. When I don't specify the year of publication, it means that any edition will be all right.

Copi, I. and Cohen, C. *Introduction to Logic*, Prentice Hall. Salmon, W. C. *Logic*, N.J.: Englewood Cliffs. (the digital version of the 1984 edition is available here: http://www.ditext.com/salmon/logic.html) (《邏輯》何秀煌譯,臺北:三 民書局。) Bowell, T. and Kemp, G. *Critical Thinking: A Concise Guide*, Routledge. Moore, B. N. and Parker, R. *Critical Thinking*, McGraw Hill.

For Chinese readings, I recommend the following.

殷海光(2006)《思想的顏色》,香港:商務印書館。 李天命《李天命的思考藝術》,香港:明報出版社。 陳波(2002)《邏輯學是什麼》,北京:北京大學出版社。 方子華等(2005)《批判思考》,McGraw-Hill Education (Asia)。 李天命(1981)《語理分析的思考方法》,香港:青年書屋。

### SUGGESTED READINGS FOR SOME MAJOR TOPICS

The readings are optional. They are useful in the sense that they provide more detailed explanations, examples and exercises related to the lecture topics.

A. Meaning and Truth

- 1. 李天命(1981)《語理分析的思考方法》,第三篇〈語言的陷阱〉,頁 37-72。
- Salmon (1984) Logic, Section 4 "Logic and language," especially chs. 31 "Use and Mention," 32 "Definitions," 33 "Analytic, Synthetic, and Contradictory Statements," and 35 "Ambiguity and Equivocation" (NOTE: this work is available on the Internet, see above)
- 3. Bowell and Kemp, "Linguistic phenomena," in their *Critical Thinking: A Concise Guide*, Chapter 2, pp. 27-40. (Page numbers here refer to the third edition, but you could still find this chapter in an earlier edition of the book. The same is applied when this work is cited.)

#### B. Arguments

1. 陳波(2002)《邏輯學是什麼》,第六章〈歸納邏輯〉,頁 162-200。

- 2. Salmon (1984) *Logic* Ch. 4 "Deductive and Inductive Arguments," Ch. 19 "Inductive Correctness," Ch. 20 "Induction by Enumeration," and Ch. 28 "Mill's Methods"
- 3. Bowell and Kemp, "Logic: Inductive Force," in their *Critical Thinking: A Concise Guide*, Chapter 4, pp. 89-117.

### C. Fallacy Analysis

- 1. 楊國榮: 〈謬誤〉,收於方子華等(2005) 《批判思考》第四章,頁 57-84。
- 2. Weston, A. (2009) *Rulebook for Arguments*, 4th/edn, Appendix I "Some Common Fallacies," pp. 73-9.
- 3. Copi and Cohen Introduction to Logic, Chapter 6 "Fallacies"

I will also assign more readings upon specific topics and such instructions will be available on *Blackboard*. Moreover, you are most welcome to have a word with me anytime if you want to explore further than what I have suggested. And you could contact me via email (see above) or in person (preferably with an appointment first).

### ASSESSMENT METHODS AND EXPLANATION

Type of assessment	max. score	
Mid-term Exam	35	(to be held on March 20 in class, starts by 2:30 pm)
Final Examination	65	(centralized examination)
Total	100	

There will be no make-up exam for students who miss any of these assessments. If the day of mid-term exam is affected by bad weather or accidents, this exam will be postponed to the following week, that is March 27, location and time remain unchanged.

- Mid-term Exam consists of multiple choice questions, true/false questions and problem solving short questions (not essay type). The exam assesses chiefly the students' understanding of basic concepts, principles and other essential elements of critical thinking, as well as to a lesser extent their capability to apply the skills learnt in sections 2 and 3 of the syllabus in solving logical problems. Thus, mid-term exam relates chiefly to Learning Outcomes 1, 2 and 3.
- Final exam consists of a set of related short questions in argument construction, argument examination, fallacy analysis and/or meaning analysis, with respect to a given article (usually less than three pages long). The questions here aim at assessing the students' combined capabilities learned in sections 2, 3 and 4 of the syllabus. Thus, the final exam relates chiefly to all the Learning Outcomes.

- For the mid-term exam only, marks will be deducted for incorrect answers. So there is a possibility of getting a negative score.
- The exam grading for the final exam takes the following three critical factors into consideration: a) whether the strongest argument, not any argument, is constructed by the student with respect to the given information, b) how relevant concepts or principles, not irrelevant or inappropriate ones, are chosen in analyzing the constructed argument, and c) whether fallacy analysis or meaning analysis are done in the proper manner, not just brandishing the labels without explanation.

All the aforesaid skills, together with the common mistakes or inadequacies in applying such skills, will be taught and demonstrated in the lectures, so attendance is of utmost importance.

- Both mid-term and final exams are conducted in English and closed-books. For the final exam ONLY, students are allowed to bring an A4 sized cheat-sheet (both sides).
- Roll call may be carried out (usually in the middle of the lectures) and absence may get marks deducted: 5 marks each time and a maximum of 20 marks may be accumulated.

# ACADEMIC HONESTY AND PLAGIARISM

Although no assignment in essay form is required in this course, I would still like to draw your attention to the 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/