The Chinese University of Hong Kong
UGED1800 Art and Methodology of Thinking 思考方法
2016/17 1st semester
Course Outline

Course overview:

The course aims to provide a basic training in critical reasoning as a methodological foundation of independent thinking. Students will learn how to extract, construct, and evaluate arguments; how to identify common fallacies and to reflect on the use of language and its bearing on clear thinking; 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:

1. Acquire analytic skills and a critical disposition.
3. Translate arguments in ordinary language into symbolic argument forms.
4. Recognize common valid argument forms.
5. Identify, classify, and assess arguments in various contexts.
6. Understand Scientific and Moral Reasoning
7. Identify and analyze informal fallacies.
8. Identify and analyze cognitive bias.

Topic:

1. Linguistic-Conceptual Analysis
2. Basic Concepts of Logic
3. Deductive Reasoning I: Categorical Syllogisms
4. Deductive Reasoning II: Hypothetical Syllogisms
5. Inductive and Scientific Reasoning
6. Moral Reasoning
7. Informal Fallacies
8. Cognitive Bias

Learning activities and workload:

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:
    (Week 3) : Linguistic-Conceptual Analysis;
    (Week 5): Basic Concepts of Logic;
    (Week 7): Categorical and Hypothetical Syllogisms;
    (Week 9): Inductive and Scientific Reasoning;
    (Week 11): Moral Reasoning;
    (Week 13): Informal Fallacies

Assessment:

Task nature	Description	Weight
Tutorial	Discussion and exercises	20%
Mid-term quiz	In class quiz	25%
Final exam	Centralized exam	40%
Written assignment	Group assignment on Moral Reasoning and Informal Fallacies	15%

Course schedule:

Week	Date	Topic	Basic Reading
1	Sept 6	Introduction	*An Introduction to Critical Thinking and Creativity,* Ch.1
2	Sept 13	Linguistic-Conceptual Analysis	《思方導航》, 第一篇
3	Sept 20	Basic Concepts of Logic	*A Concise Introduction to Logic*, Ch. 1
4	Sept 27	Deductive Reasoning I: Categorical Syllogisms	*A Concise Introduction to Logic,* Ch.4-5
5	Oct 4	Deductive Reasoning I: Categorical Syllogisms	*A Concise Introduction to Logic,* Ch.4-5
6	Oct 11	Deductive Reasoning II: Hypothetical Syllogisms	*A Concise Introduction to Logic*, Ch.6; *A rule book for arguments,* Ch.6
7	Oct 18	Inductive and Scientific Reasoning	*A Concise Introduction to Logic,* Ch.9&13 ; *How to Think About Weird Things,* Ch. 6
8	Oct 25	**Mid-term quiz**	
9	Nov 1	Inductive and Scientific Reasoning	*A Concise Introduction to Logic,* Ch.9&13 ; *How to Think About Weird Things,* Ch. 6
10	Nov 8	Moral Reasoning	*An Introduction to Critical Thinking and Creativity,* Ch.18
11	Nov 15	Informal Fallacies	《思方導航》, 第五篇
12	Nov 22	Informal Fallacies	《思方導航》, 第五篇
13	Nov 29	Cognitive Bias	*Thinking, Fast and Slow,* Part 2.

Details of course website:

Lecture notes and information on assignments will be posted on the Blackboard Learn website.

Recommended learning resources: (# main reference)

Critical Thinking in general :

Joe Y. F. Lau, *An Introduction to Critical Thinking and Creativity : Think More, Think Better,* Wiley publication, 2011.#
Brooke Noel Moore and Richard Parker, *Critical Thinking*, 10th ed., McGraw Hill, 2012
Theodore Schick and Lewis Vaughn, *How to Think About Weird Things: Critical Thinking for a New Age*, 6th ed., McGraw-Hill, 2010.
Jordan Ellenberg, *How Not to Be Wrong: The Power of Mathematical Thinking*, Penguin Books, 2015.

Linguistic-Conceptual Analysis:

貝剛毅,《思方導航》，匯智出版有限公司, 2011.#
李天命,《語理分析的思考方法》，青年書屋，1999
李天命,《李天命的思考藝術》(終定本), 明報出版社，1998

Formal Logic:

Patrick Hurley, *A Concise Introduction to Logic*, 10th ed., Wadsworth, 2008.#

Anthony Weston, *A Rulebook for Arguments*, 4th ed., Hackett Publishing Company, 2009.

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

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

林正弘,《邏輯》, 三民書局，1994。

Informal Logic:

Douglas Walton, *Informal Logic 2nd edition*, Cambridge University Press, 2008#

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

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

貝剛毅,《思方導航》, 匯智出版有限公司, 2011.#

李天命,《哲道行者》, 明報出版社，2005

Cognitive Bias:

Daniel Kahneman, *Thinking, Fast and Slow*, Penguin Books, 2012,#

David Hand, *The Improbability Principle*, Bantam Press, 2014

魯爾夫.杜伯里著,王榮輝譯,《思考的藝術》, 商周出版, 2012

魯爾夫.杜伯里著,王榮輝譯,《行為的藝術》, 商周出版, 2012

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Feedback for evaluation:

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

2. 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 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.