This is a draft outline.
The final version will be announced when term starts.

Logic 邏輯 (UGED 1111F)

Draft Course Outline for Term 2, 2016/17

Lecture Hours : Tuesday 16:30 - 18:15
Classroom : SWH2 (at Fung King Hey Building, central campus)
Language Used : Cantonese and English

Lecturer : Dr. Wan Shun Chuen 溫信傳博士 (Philosophy Department)
Email : shunchuenwan@gmail.com
(NOTE: this is the only working email for students to contact me, and **NO** other address is linked to this one)
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A Few Important Preliminary Remarks

1. This course will be 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 a few Chinese reference works.
2. Since logical sentences are symbolisations of natural language and logic operations per se is similar to some mathematical operations, therefore if you are good at English (our working language) and mathematics, you will have a big chance of enjoying this subject.
3. Students who look forward to topics like linguistic analysis 語理分析 and informal fallacies 非形式謬誤 should enroll critical thinking courses, not logic.
4. Registered students must visit *Blackboard* regularly for updated information and announcements of the course. All material—course outline, handouts, readings, announcements, etc.—will be kept in just one folder, namely the "Course Content" folder.
5. For students with special education needs, please notify me in person when term begins. As it usually takes considerable time to book a room, arrange an extra helper, etc.

Course Description and Objectives

This course is to develop the students' 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 inferences and techniques of applying them for determining the validity of arguments.

LEARNING ACTIVITIES include mainly lectures, and also film shows (basically short clips), in-class exercises/discussions, test and exam.

LEARNING OUTCOMES

By attending the course, students are expected

1. to identify and explain the basic concepts, principles and other essential elements in logic——truth analysis, argument identification and classification;
2. to identify and explain the basic concepts, principles and other essential elements in deductive argument examination——basic deductive forms, argument assessment (validity and soundness);
3. to analyze how an argument goes wrong——formal fallacy analysis.

COURSE SYLLABUS

1. Introduction
   * what logic 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 3
   * the basic parts of an argument（論證）
   * two kinds of truth and their respective characteristics
   * arguments go wrong: formal fallacies（形式謬誤）
   note: informal fallacies will not be taught in this course
3. To think in a proper way II: arguments
   this section relates chiefly to Learning Outcomes 1, 2 and 3
   * two common forms of argument: deduction（演繹法）and induction（歸納法）
   * to assess the goodness of deduction: validity（有效）and soundness（對確）
4. The ultimate goal of logic: argument analysis
   this section is a consolidation of the Learning 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

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*.

> Hurley, J. P. (2012) *A Concise Introduction to Logic*, 11th edition, Boston, MA: Wadsworth.

This is the edition I use commonly. It is a standard textbook good enough for a 2-term logic course. It contains detailed explanation of technical terms and rules, and lots of examples, exercises and suggested answers for selection questions. You may not be able to get the most updated edition and earlier editions are perfectly acceptable. Some copies, probably older editions, are already reserved in our various libraries. As a general reference, Hurley (2012) is resourceful certainly. Yet it is over 700 pages and covers much more than we will discuss. The following is much shorter, thus more easily accessible.

> Weston, A. (2009) *Rulebook for Arguments*, 4th/edn, Hackett Publishing Company. (early editions are also acceptable)

This one is non-technical and short (under 100 pages). Although its content suits more for critical thinking, I still highly recommend it as a reader friendly introduction for the basic steps of argument.

You may also consult the followings for 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. (with various editions, like Hurley (2012) also with lots of examples, exercises and suggested answers for selection questions)（中譯本：柯比：《邏輯導論》修訂本，香港：香港公開大學出版社，2000。根據 1968 年第三版譯，同時略去練習。）
- 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)（中譯本：《邏輯》何秀煌譯，臺北：三民書局。）(this one is shorter than Hurley and Copi, but without exercise)

For Chinese references, I recommend the following.

- 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)。
- 香港中文大學哲學系編譯（1982）《中譯邏輯學詞彙》，香港：香港中文大學出版社。

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SUGGESTED REFERENCES FOR SOME MAJOR TOPICS

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

A. Basic Techniques

1. 陳波（2002）《邏輯學是什麼》，第一章〈邏輯起源…〉和第二章〈邏輯…推理和論證…〉，頁 1-67。
2. Hurley (2012) *A Concise Introduction to Logic* Chapter 1 "Basic Concepts", pp. 1-77 (NOTE: You could skip sections 1.2 "Recognizing Arguments" and 1.7 "Extended Arguments" for the time being.)
3. Salmon (1984) *Logic,* Chapters 1 "Argument", 2 "Inference" and 5 "Validity" (NOTE: This work is available on the Internet, see above.)

B. Syllogism 三段論

1. 陳波（2002）《邏輯學是什麼》，第四章〈詞項邏輯〉，頁 103-136。
2. Hurley (2012) *A Concise Introduction to Logic* Chapters 4 "Categorical Propositions" and 5 "Categorical Syllogism"
3. Salmon (1984) *Logic* Ch. 13 "Categorical statements," Ch. 14 "Categorical Syllogisms" and Ch. 15 "Venn Diagrams and Class Logic"

C. Deductive Arguments

1. 陳波（2002）《邏輯學是什麼》，第三章〈命題邏輯〉，頁 68-102。
2. 方子華等（2005）《批判思考》，第三章〈演繹推理〉，頁 35-56。
3. Weston, A. (2009) *Rulebook for Arguments*, Chapter VI "Deductive Arguments," pp. 37-48.
4. Hurley (2012) *A Concise Introduction to Logic*, Chapters 6 "Propositional Logic" and 7 "Natural Deduction"
5. Salmon (1984) *Logic* Chapters 4 "Deductive and Inductive Arguments," (NOTE: You could skip the part on Induction.)

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).

TENTATIVE ASSESSMENT METHODS AND EXPLANATION

(Details may be revised, but the format of assessment will remain roughly the same.)

Assessment	**Total scores**	
Test	40	(to be held in class, starts by 16:30, date to be confirmed)
	location for the test will be changed	
Final Exam	60	(yet to decide, either in class or centralised exam)
total	100	

1. There will be no make-up assessment for students who miss the test or the final exam.
2. If the day of test is affected by bad weather or accidents, it will be POSTPONED to the following week, time will remain unchanged.

SOME EXPLANATION ON THE ASSESSMENT METHODS:

- The test may consist of any of the following: multiple choice, true/false and problem solving short questions (not essay type). The test assesses chiefly the students' understanding of basic concepts, principles and other essential elements of logic and argument analysis, as well as their capability to apply the skills learnt in sections 2 and 3 of the syllabus in solving logical problems.
- The final exam will consist mainly of problem solving short questions (not essay type) and to a lesser extent other types of questions. The exam assess chiefly the students' understanding of basic concepts, principles and other essential elements of logic and knowledge analysis, as well as to their capability to apply the skills learnt in sections 2 and 3 of the syllabus in solving logical problems.
- In test and exam, only the logic operation system I teach will be accepted.
- The test (lasts at most an hour) and final exam (lasts about one and a half hours) are conducted in English and closed-books.

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/