Course Outline (General Education)

Course Code/Section: UGED1111F Year: 2022-2023 Term 1

Course Title: Logic

Time/Venue: Wednesdays 9:30 – 11:15 am, LSK 514-5 Course website: Blackboard

Course Teacher: Rimell, Nicholas. Email: nicholaskrimell@cuhk.edu.hk Phone: 3943 7139

Office Location: Room 416, Fung King Hey Building Office Hours: Wednesdays 11:45 am - 1:45 pm

Course overview: (as per the course description approved by Senate Committee on GE)

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 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: (based on the learning outcomes approved by Senate Committee on GE)

- 1. Acquire analytic skills and a critical disposition.
- 2. Grasp the central concepts in classical logic.
- 3. Demonstrate familiarity with major proof-theoretic methods in 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.

<u>Learning Activities</u>: (as per the learning activities approved by Senate Committee on GE)

- 1. Lecture: 2 hours a week
- 2. Reading: 2-3 hours for the weekly required reading
- 3. Participation and Assignments: Students will be expected to make contributions to class discussion and to participate in learning activities on a regular basis.

Topics

- 1. Logical thinking
- 2. Basic concepts
- 3. Deductive and inductive reasoning
- 4. Categorical syllogisms
- 5. Symbolic language and truth table
- 6. Natural deduction in propositional logic
- 7. Informal fallacies

Weekly Course Schedule and Reading Assignments*:

Week/Date	Topic	Required readings/other requirements
1. 7 th Sept.	Introduction: What is an argument?	Hurley & Watson, 'Why study logic?' and §1.1-§1.2 (pp. xxii-xxiv, 1-25)
2. 14 th Sept.	Deduction, induction, and how to evaluate an argument	Hurley & Watson, §1.3-§14, §1.5 pp. 59-62 only, & §1.6 pp. 67-69 only (pp. 33-54, 59-62, 67-69)
3. 21st Sept.	Categorical propositions: The modern standpoint	Hurley & Watson, §4.1-§4.4 (pp. 206-237)
4. 28 th Sept.	Categorical propositions: The traditional standpoint	Hurley & Watson, §4.5-§4.7 (pp. 240-267)
5. 5 th Oct.	Categorical syllogisms	Hurley & Watson, §5.1-§5.3 (pp. 274-302) {Can skip "Proving the Rules", pp. 301-302}

6. 12 th Oct.	Midterm	No new reading.
7. 19 th Oct.	Propositional logic: Introduction	Hurley & Watson, §6.1-§6.2 (pp. 327-350)
8. 26 th Oct.	Propositional logic: Truth tables	Hurley & Watson, §6.3-§6.6 (pp. 354-393)
9. 2 nd Nov.	Natural deduction in propositional logic: Introduction	Hurley & Watson, §7.1-§7.4 (pp. 403-445)
10. 9 th Nov.	Natural deduction in propositional logic: Conditional & indirect proof	Hurley & Watson, §7.5-§7.7 (pp. 453-467)
11. 16 th Nov.	Informal fallacies	Hurley & Watson, §3.1-§3.4 (pp. 125-179)
12. 23 rd Nov.	Analogical reasoning, moral reasoning, and the relationship between deduction and induction	Hurley & Watson, §9.1 (pp. 540-543) Singer, pp. 229-236 only
13. 30 th Nov.	Review and discussion (tentative**)	No new reading.

^{*} This schedule is unofficial and tentative. The schedule will be finalized before the end of the drop/add period.

Required readings and other recommended readings/ learning resources:

Required reading:

Hurley, Patrick J., & Watson, Lori (2018). *A Concise Introduction to Logic*, 13th ed. Boston, MA: Cengage Learning. (**Textbook. This book is available at the CUHK bookstore.**)

Singer, Peter (1972). "Famine, Affluence, and Morality." *Philosophy and Public Affairs* 1 (3): 229-243. (Provided on Blackboard.)

Additional (recommended) learning resources:

Barker-Plummer, Dave; Barwise, Jon; & Etchemendy, John (1999). *Language, Proof, and Logic*. New York and London: Seven Bridges Press.

Bostock, David (1997). Intermediate Logic. Oxford: Clarendon Press.

Copi, Irving; Cohen, Carl; & Rodich, Victor (2019). Introduction to Logic, 15th ed. New York: Routledge.

Lau, Joe Y. F. (2011). *An Introduction to Critical Thinking and Creativity: Think More, Think Better*. Hoboken, New Jersey: Wiley.

Restall, Greg (2006). Logic. Montreal: McGill's University Press.

Assessment scheme:		
Assessment component	Description	Weight (%)
1. Midterm Exam	1. To be held 12 th October (see above)	1. 35%
2. Final Exam	2. To be held 5 th December (see above)	2. 50%
3. Participation	3. The nature of assessed participation will be	3. 15%
	tailored to the class size and may include:	
	individual or group presentations, in-class	
	discussion, in-class collaborative activities,	
	and/or occasional homework.	

Note that both exams will be held in person provided that teaching is in person. If we are required to hold the class online, the exams will be held online as well.

^{**} Subject to students' consent, we will hold the final examination in our classroom Monday, 5th December. If this is not possible due to genuine scheduling conflicts, our schedule will be adjusted accordingly.

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.

Feedback for evaluation

- a. Course and teaching evaluation survey will be conducted in the second last week of the course. Students are reminded of their responsibility and right to give feedback to facilitate enhancement of the course.
- b. Students are welcome to give feedbacks to the course teacher at any time in person or through emails.

Grade Descriptors:

http://phil.arts.cuhk.edu.hk/~phidept/UG/Grade_descriptors.pdf

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I am/we are submitting the assignment for:

- □ an individual project or
- □ a group project on behalf of all members of the group. It is hereby confirmed that the submission is authorized by all members of the group, and all members of the group are required to sign this declaration.

I/We declare that the assignment here submitted is original except for source material explicitly acknowledged, the piece of work, or a part of the piece of work has not been submitted for more than one purpose (i.e. to satisfy the requirements in two different courses) without declaration, and that the submitted soft copy with details listed in the <Submission Details> is identical to the hard copy(ies), if any, which has(have) been / is(are) going to be submitted. I/We also acknowledge that I am/we are aware of University policy and regulations on honesty in academic work, and of the disciplinary guidelines and procedures applicable to breaches of such policy and regulations, as contained in the University website http://www.cuhk.edu.hk/policy/academichonesty/. In the case of a group project, we are aware that each student is responsible and liable to disciplinary actions should there be any plagiarized contents in the group project, irrespective of whether he/she has signed the declaration and whether he/she has contributed directly or indirectly to the plagiarized contents.

It is also understood that assignments without a properly signed declaration by the student concerned and in the case of a group project, by all members of the group concerned, will not be graded by the teacher(s).

Signature(s)	Date	2
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Name(s)	Student ID(s)
Course code	Course title