

CCC8011-LEC10

Term 1, 2021-2022

Course Title	: Critical Thinking: Analysis and Argumentation (慎思明辨: 分析與論證)
Course Code	: CCC8011
Recommended Study Year	: 1 st Year
No. of Credits/Term	: 3
Mode of Tuition	: Sectional
Class Contact Hours	: 3 hours per week
Category in Core Curriculum	: Common Core
Prerequisite(s)	: N/A
Co-requisite(s)	: N/A
Exclusion(s)	: N/A
Exemption Requirement(s)	: N/A

Course Description

The primary aim of this course is to teach first-year students the basic but crucial skills of analyzing problems, evaluating inferences, and presenting arguments for or against claims or decisions. Students will acquire these skills by learning about the basic concepts and methods of critical thinking, and by working through problem solving exercises requiring them to employ these concepts and methods. Students will further develop these skills by producing extended arguments defending what they take to be the correct responses to accessible but challenging real issues and problems. The course also aspires to instill in students an open and inquiring attitude, so that students are more willing to look for reasons for and against their views, and more willing to change their views in the face of evidence. Hence, it is hoped that students will develop a habit of reasoning carefully upon completion of this course.

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Aims

This course aims to: (a) increase students' ability to analyze, construct, evaluate, and present arguments; (b) improve students' ability to avoid mistakes in reasoning; and (c) instill in students an open and inquiring attitude.

Learning Outcomes

Students are expected to demonstrate the following:

- L1) The ability to successfully employ a number of central concepts of critical thinking and argumentation;
- L2) The ability to recognize and clearly present arguments in ordinary language, and to analyze the structure of these arguments;
- L3) The ability to establish the deductive validity or invalidity of an argument, to recognize and criticize the flaws of a weak argument, and to develop objections;
- L4) The ability to evaluate the reasons for and against positions in sophisticated debates, and to construct clear and persuasive arguments that defend the student's view about such debates;
- L5) The ability to construct arguments cogently in speech and in ordinary English, including in the form of an argumentative essay

Course Content

This course consists of four components. The first two components cover basic skills in critical thinking, while the last component involves students engaging in sophisticated debates and writing an argumentative essay. The third component provides a bridge from the first two components to the final component.

Component 1 (Basic concepts of reasoning) (5 weeks): possibility, necessity; necessary and sufficient conditions (as applied to properties); consistency and entailment (applied to sets of natural language sentences); definitions (reportive, precisising and stipulative definitions), evaluation of definitions; arguments, validity (as applied to arguments in natural language); argument forms, valid argument forms, basic intuitive methods for determining the validity of simple argument forms; inductive strength (inductively strong, weak and bad arguments).

Component 2 (Presenting, analysing, and evaluating arguments) (2 weeks): presenting arguments in simple and complex standard form, presenting arguments using argument maps, determining the structure and components of arguments (premises, conclusions, objections, hidden components), criticising arguments (finding counterexamples, putting forward objections, and detecting the following fallacies: begging the question, equivocation, denying the antecedent, affirming the consequent and wishful thinking).

Component 3 (Intermediate component) (0-3 weeks): The role of this component is to connect the basic skills taught in the prior components to the more advanced tasks

– namely, engaging with sophisticated arguments and writing an argumentative essay
– in the final component. Topics include: i) further treatment of fallacies, including fallacies involving cognitive biases; ii) more advanced abstract reasoning (employing truth tables and formal natural deduction).

Component 4 (Issues and debates) (3-6 weeks) At least three accessible but sophisticated real debates will be covered. The choice of these debates will be made by the instructor. These debates may stem from ethics, science, or current affairs. As well as discussing these debates in class, students will develop their own arguments defending what they think is the right response to the questions involved in these debates. This work will include a 500-600 word argumentative essay on one of these debates. Examples of debates that might be covered include the following questions: What is the difference between science and non-science?; Is eating non-human animals morally wrong?; Is abortion morally wrong?; Is euthanasia morally wrong?; Is human gene-editing morally wrong?; Is it ever right to kill a few to save many?; Is it fair to allow trans athletes to compete in women's divisions?; Should life imprisonment be abolished? Each student will be expected to participate in a debate activity on one of these issues.

Teaching Method

Instructors will provide accessible lectures and ample opportunities for students to apply the methods and strategies under discussion in concrete settings. Students will be expected to engage in a number of activities, such as problem solving exercises, class discussions and debates, assignments and tests, and argumentative essay writing.

Measurement of Learning Outcomes

Students' progress towards the learning outcomes will be measured by the performance of students in:

- class discussion and/or class presentations (L1-5)
- written work involving short answer questions and problems, such as tests, exams, assignments, and quizzes (L1-5)
- closed-book tests and exams (L1-5).

Assessment

- Assignments: There will be two take home assignments that will each contribute **10%** to your final mark.
- Final Exam: There will be an end of term exam that contributes **40%** to your final mark.
- Debate activity: Each student will be put in a debate group that will collectively verbally argue for or against one claim. This activity will contribute **10%** to your final mark
- Argumentative essay: Each student will write an argumentative essay of 500-600 words. This essay will argue for or against one of the claims under debate. This essay will contribute **20%** to your final mark. The due date will be after

the final class of term and before the end of the exam period. The precise date will be announced later in the term.

- Class participation: Class participation will contribute **10%** to your final mark. Class participation includes asking questions, contributing to discussion in class, completing class exercises and contributing to other class activities.

Course Materials

All course materials will be available online on Moodle, aside from the recommended textbooks, for you to download. This includes readings, when appropriate. (There are no readings for the first week.)

Key Reading

Lau, Joe Y. F. (2011). *An introduction to critical thinking and creativity: Think more, think better*. Hoboken, NJ: John Wiley & Sons.

Supplementary Readings

Fisher, A. (2001). *Critical thinking: An introduction*. Cambridge, England: Cambridge University Press.

Hacking, I. (2001). *An Introduction to probability and inductive logic*. Cambridge, England: Cambridge University Press.

Rowbottom, D. P. (2015). *Probability*. Cambridge, England: Polity.

Salmon, M. H. (2013). *Introduction to Logic and Critical Thinking*, 6th ed. Boston, MA: Wadsworth.

Singer, P. (2011). *Practical ethics*, 3rd ed. New York, NY: Cambridge University Press.

Important Notes

- (a) Students are expected to spend a total of 9 hours (i.e. 3 hours of class contact and 6 hours of personal study) per week to achieve the course learning outcomes.
- (b) Students shall be aware of the University regulations about dishonest practice in course work, tests and examinations, and the possible consequences as stipulated in the Regulations Governing University Examinations. In particular, plagiarism, being a kind of dishonest practice, is “the presentation of another person’s work without proper acknowledgement of the source, including exact phrases, or summarised ideas, or even footnotes/citations, whether protected by copyright or not, as the student’s own work”. Students are required to strictly follow university regulations governing academic integrity and honesty.
- (c) Students are required to submit writing assignment(s) using Turnitin.
- (d) To enhance students’ understanding of plagiarism, a mini-course “Online Tutorial on Plagiarism Awareness” is available on <https://pla.ln.edu.hk/>.