

CTDL 1901 Cognitive Foundations of University Education: Critical Thinking and Data Literacy

Course Schedule: Tuesday 15:00 – 16:20 & Thursday 15:00 – 16:20 (LT-C)

Course Instructors

Lectures:

Prof. NAM, Sai Lok, Assistant Professor of Humanities Education/HUMA (shlewis@ust.hk)

Tutorials - Science and Technology:

Prof. VONG, Kenward, Assistant Professor/CHEM (kvong@ust.hk)

Tutorials - Business:

Dr. SAUERWEIN, Meike, Lecturer I/ENVR (meike@ust.hk)

Tutorials - Personal Life and Society:

Prof. PARK, Sunhee, Adjunct Assistant Professor/SOSC (sunheepark@ust.hk)

Instructional Assistant:

Mr. BAGAI, Neel Gautam (ngbags@ust.hk)

Course Description

This course provides an introduction to critical thinking and data literacy. Students will be equipped with critical tools to analyse problems of reasoning, evaluate the truthfulness of evidence, examine the fallacies of thinking, as well as the ability to construct valid arguments and reasonable solutions for their personal and professional life.

Course ILOs

Upon completion of this course, students are expected to be able to do the following:

1. Identify and analyse relevant information, data, and sources for problems
2. Articulate assumptions made in arguments
3. Construct valid arguments using analytical skills, data, and evidence
4. Justify solutions with relevant criteria and standards
5. Evaluate implications and consequences of the solutions
6. Communicate decisions effectively using data and evidence

Course Highlights

1. One of the Foundations courses of the University's Common Core Program which is designed to enhance students' critical thinking and problem-solving competencies. These competencies are transferable which can be used throughout their undergraduate study.
2. Students will learn critical tools to analyse problems of reasoning, evaluate the truthfulness

of evidence, examine the fallacies of thinking, as well as the ability to construct valid arguments and reasonable solutions in the lectures.

3. The tutorials are delivered with problem-based learning approach to enhance active learning.

Assessment

Mid-term Quiz (13th March): 15%

Written Assignments: 20% * 2 = 40%

Tutorial Participation: 15%

Final Examination (8th May): 30%

Students are allowed the right to use generative AI for their assignment, but work should be appropriately cited and disclose the parts which have been created by generative AI. Work that presents AI created work as own will be considered as plagiarism.

Textbook

Chatfield, Tom. 2018. Critical Thinking: Your Guide to Effective Argument, Successful Analysis & Independent Study. Sage Publications Ltd. (All readings will be uploaded to Canvas.)

Course Schedule

Lectures at LT-B (Weeks 1-6)

Dates	Content	Readings
4 th Feb	Module 0: Introduction	N/A
6 th Feb	Module 1: Argumentation	Chatfield, ch. 1-2
11 th Feb	Module 2: Reasoning	Chatfield, ch. 3-5
13 th Feb		
18 th Feb		
20 th Feb	Module 3: Fallacies	Chatfield, ch. 8, 10 (selected)
25 th Feb		
27 th Feb		
4 th March	Module 4: Cognitive Biases	Chatfield, ch. 9,11
6 th March		

11 th March		
13 th March	Mid-term Quiz	No readings

Tutorials (Weeks 7-12)

March 18, 20, 25, 27

April 8, 10, 15, 17, 22, 24, 29

May 6

Please refer to Canvas for more information.

Holidays

April 1 (Mid-Term Break)

April 4 (Ching Ming Festival)

May 1 (Labour Day)

Mid-term quiz (13th March):

Contains MCQ and T/F questions designed to test your understanding of the teaching materials

Final Exam (TBC)

Students are expected to critically analyze the provided scenarios, applying course concepts to the case studies. This includes, but is not limited to, evaluating the arguments presented, identifying fallacies and cognitive biases as well as articulating ideas in a sophisticated and well-structured manner.

Other Resources

CTDL1901 Instagram Page: https://www.instagram.com/ctdl1901_hkust/ (@ctdl1901_hkust)