

Course Syllabus

Course Code: CTDL 1901
Course Title: Cognitive Foundations of University Education: Critical Thinking and Data Literacy
Course Offered in: Spring 2024, Monday 16:30 - 17:50 & Friday 12:00 – 13:20 (LT-J)

Course Instructor:

Lectures

- Prof. SHAN, Yafeng, Assistant Professor/HUMA (Office: 3356; Office Hours: 2 – 4 pm on Wednesdays; Email: hmyfshan@ust.hk)

Tutorials - Science and Technology Group

- Prof. CHASNOV, Jeffery Robert, Professor/MATH (machas@ust.hk)
- Prof. MA, Robin Lok Wang, Associate Professor of Engineering Education/MAE (melwma@ust.hk)

Tutorials - Business Group

- Prof. JAISINGH, Jeevan, Associate Professor of Business Education/ISOM (jeevan@ust.hk)
- Dr SAUERWEIN, Meike, Lecturer I/ENVR (meike@ust.hk)

Tutorials - Personal Life and Society Group

- Prof. ZHANG, Lok Cheung Lawrence, Associate Professor/HUMA (hmlczhang@ust.hk)
- Prof. ZHENG Wenjuan, Assistant Professor/SOSC (wjzheng@ust.hk)

Instructional Assistants

- Ms. CHOY, Yee Lam (Stephanie) (ylcsteph@ust.hk)
- 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.

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Course Intended Learning Outcomes (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

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 Outline:

Week	Date	Content	Readings
1	2 Feb	Argument	Chatfield, ch. 1
2	5 Feb	Argument & Explanation	Chatfield, ch. 2
2	9 Feb	Deduction	Chatfield, ch. 3
3	16 Feb	Induction	Chatfield, ch. 4
4	19 Feb	Abduction	Chatfield, ch. 5

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4	23 Feb	Formal Fallacies	Chatfield, ch. 8
5	26 Feb	Informal Fallacies	Chatfield, ch. 10
5	1 Mar	Heuristic	Chatfield, ch. 9
6	4 Mar	The Anchoring & Representativeness Heuristic	Chatfield, ch. 11
6	8 Mar	Loss aversion & Confirmation bias	N/A
6	11 Mar	Mid-Term Review + Q&A	N/A
7	15 Mar	Mid-term examination	N/A

Assessment

In-Class Attendance: 5%

Mid-term Quiz (March 15th, 2024): 15%

Two Essays: 20% * 2

Final Examination (May 10th, 2024): 25%

Tutorial Participation: 15%

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Tutorials (Weeks 8-13)

March 18, 22, 25

April 8, 12, 15, 19, 22, 26, 29

May 3, 6

Please refer to Canvas for more information.

Holidays

Feb 12 (Third day of Lunar New Year), March 29 (Mid-Term Break), April 1 & 5 (Mid-term Break)

Mid-term quiz (15th March):

Contains MCQ and T/F questions

To test your understanding of the teaching materials

Final Exam (10th May)

Students are required to critically analyse the scenarios provided.

The expectation is to apply the content learnt in the course to the provided scenarios (including but not limited to analysing the arguments made in the essay, identifying fallacies and cognitive biases, and developing and presenting your idea in a sophisticated manner)