

COURSE OUTLINE		
TERM: Spring 2020	COURSE NO: PHIL 110	
INSTRUCTOR: Michel-Antoine Xhignesse	COURSE TITLE: Critical Thinking	
OFFICE: FIR 444 LOCAL: 1-604-986-1911 ext. 3691 E-MAIL: michelxhignesse@capilanou.ca	SECTION NO(S): 01	CREDITS: 3.0
OFFICE HOURS: Monday 15h00-16h00, Wednesday 14h00-16h00		
COURSE WEBSITE: See Moodle		

Capilano University acknowledges with respect the Lil'wat, Musqueam, Squamish, Sechelt, and Tsleil-Waututh people on whose territories our campuses are located.

COURSE PREREQUISITES/CO-REQUISITES

None

COURSE FORMAT

Three hours of class time, plus an additional hour delivered through on-line or other activities for a 15-week semester, which includes two weeks for final exams.

CALENDAR DESCRIPTION

This course is an introduction to critical reasoning. Students acquire the tools and concepts needed to analyze and evaluate arguments encountered in everyday life, and in the more technical contexts of their further academic studies. They learn how to recognize arguments by type, and to reconstruct them clearly and fairly in order to assess their rational strength. The sorts of topics covered include the analysis of common fallacies, the resolution of ambiguities, deductive validity and varieties of inductive support, probabilistic reasoning, decision theory, inductive generalization, causal reasoning, and hypothesis confirmation. The course will be of benefit to all students who want to develop their logical skills.

COURSE NOTE

PHIL 110 is an approved Science and Technology course for Cap Core requirements. PHIL 110 is an approved Quantitative/Analytical course for baccalaureate degrees.

Phil 120 is a natural continuation of this course and is recommended for those who want a thorough introduction to the concepts and principles of rational thought.

REQUIRED TEXTS AND/OR RESOURCES

Our primary text is Matthew J. van Cleave's [Introduction to Logic and Critical Thinking v.1.4](#), a free, open-source textbook.

All other readings will be posted to Moodle.

COURSE STUDENT LEARNING OUTCOMES

On successful completion of this course, students will be able to do the following:

1. Explain the key concepts of Critical Thinking
2. Recognize, critically analyze, and evaluate arguments
3. Explain common fallacies and other argumentative errors
4. Identify the unstated presuppositions of arguments
5. Construct rationally persuasive arguments
6. Apply problem-solving skills involving some of the following: syllogistic logic, probability theory, decision theory, inductive generalization, causal reasoning, hypothesis confirmation

Students who complete this Science and Technology course will be able to do the following:

1. Apply numerical and computational strategies to solve problems
2. Evaluate scientific information (e.g., distinguish primary and secondary sources, assess credibility and validity of information).
3. Demonstrate how a problem, concept, or process can be modelled numerically, graphically, or algorithmically.
4. Explain how scientific inquiry is based on investigation of evidence and evolves based on new findings.

COURSE CONTENT

Topics and required readings are listed below.

Week 1, January 7

Introduction: The Basics I

What is an argument? What is *not* an argument? How can we identify premises and conclusions? What is the difference between truth, soundness, validity, and consistency?

- Van Cleave Ch. 1: Reconstructing and analyzing arguments

Week 2, January 14

The Basics II

What is an argument? What is *not* an argument? How can we identify premises and conclusions? What is the difference between truth, soundness, validity, and consistency?

- Van Cleave Ch. 1: Reconstructing and analyzing arguments

Week 3, January 21

Formal Logic I

We will learn about propositional connectives and master translating arguments from ordinary language into propositional logic, and learn to use truth tables to evaluate them.

- Van Cleave Ch. 2: Formal Methods of Evaluating Arguments; §2.1-2.10

Week 4, January 28

Formal Logic I

We will learn about propositional connectives and master translating arguments from ordinary language into propositional logic, and learn to use truth tables to evaluate them.

- Van Cleave Ch. 2: Formal Methods of Evaluating Arguments; §2.1-2.10

Week 5, February 4

Formal Logic II

We will learn how to construct proofs in propositional logic, and will learn about categorical logic and constructing Venn diagrams for arguments.

- Van Cleave Ch. 2: Formal Methods of Evaluating Arguments; §2.11-2.17

Week 6, February 11

Formal Logic II

We will learn how to construct proofs in propositional logic, and will learn about categorical logic and constructing Venn diagrams for arguments.

- Van Cleave Ch. 2: Formal Methods of Evaluating Arguments; §2.11-2.17

Week 7, February 18

READING WEEK

No class

- No Class

Week 8, February 25

Assessing and Citing Sources

We will develop criteria for, and questions to consider when, evaluating sources. We will also learn how to find sources in the library, how and when to cite them, and how to assess online sources.

- Library Skills Tutorial
- Supplementary readings:
 - Andrea Bellemare – [The real ‘fake news’: how to spot misinformation and disinformation online](#)
 - Andrea Bellemare – [So, you think you’ve spotted some ‘fake news’—now what?](#)

Week 9, March 3

Fallacies I

We will examine the difference between formal and informal fallacies, and learn to identify many common fallacies.

- Van Cleave Ch. 4: Informal Fallacies, §4.1-4.2

Week 10, March 10

Fallacies II

We will learn to identify common fallacies of relevance, including the *ad hominem*, appeals to authority, consequences, and ignorance, and the genetic, red herring, straw man, and tu quoque fallacies.

- Van Cleave Ch. 4: Informal Fallacies, §4.3

Week 11, March 17

Statistical Reasoning I

Inductive arguments, statistical generalizations, analogies, and causal arguments.

- Van Cleave Ch. 3: Evaluating inductive arguments and probabilistic and statistical fallacies, §3.1-4.

Week 12, March 24

Statistical Reasoning II

We will learn how to compute basic probabilities, and evaluate probabilistic reasoning.

- Van Cleave Ch. 3: Evaluating inductive arguments and probabilistic and statistical fallacies, §3.5-10.

Week 13, March 31

Language and Precision I

Avoiding ambiguity, overgenerality, and vagueness.

- Bassham et al. Ch. 4: Language, p. 86-93

Week 14, April 7

Language and Precision II

Formulating precise definitions.

- Bassham et al. Ch. 4: Language, p. 93-103

EVALUATION PROFILE

Participation: 10%

- Attendance (1% per day, starting week 2): 10%

Presentation: 10%

- Read Bad Argument Presentation

Homework Quizzes (online): 50%

- January 19: 10%
- February 2: 10%
- March 8: 10%
- March 22: 10%
- April 12: 10%

Final Exam (comprehensive): 30%

- Date TBA, April 15-24

TOTAL: 100%

GRADING PROFILE

A+ = 90-	B+ = 77-	C+ = 67-	D = 50-
A = 85-89	B = 73-	C = 63-66	F = 0-49
A- = 80-84	B- = 70-	C- = 60-62	

Incomplete Grades

Grades of Incomplete “I” are assigned only in exceptional circumstances when a student requests extra time to complete their coursework. Such agreements are made only at the request of the student, who is responsible to determine from the instructor the outstanding requirements of the course.

Participation

The participation grade is based entirely on attendance (1% per day, up to 10%). Students are expected to attend and participate in all classroom activities.

Late Assignments

Not accepted

Missed Exams/Quizzes/Labs etc.

Make-up exams, quizzes and/or tests are given at the discretion of the instructor. They are generally given only in medical emergencies or severe personal crises. Some missed labs or other activities may not be able to be accommodated. Please consult with your instructor.

Attendance

Students are expected to attend all classes and associated activities.

English Usage

Students are expected to proofread all written work for any grammatical, spelling and stylistic errors. Instructors may deduct marks for incorrect grammar and spelling in written assignments.

Electronic Devices:

Students may use electronic devices during class for note-taking only.

On-line Communication

Outside of the classroom, instructors will (if necessary) communicate with students using either their official Capilano University email or Moodle; please check both regularly. Official communication between Capilano University and students is delivered to students' Capilano University email addresses only.

UNIVERSITY OPERATIONAL DETAILS**Tools for Success**

Many services are available to support student success for Capilano University students. A central navigation point for all services can be found at: <https://www.capilanou.ca/student-life/>

Capilano University Security: download the [CapU Mobile Safety App](#)

Policy Statement (S2009-06)

Capilano University has policies on Academic Appeals (including appeal of final grade), Student Conduct, Academic Integrity, Academic Probation and other educational issues. These and other policies are available on the University website.

Academic Integrity (S2017-05)

Any instance of academic dishonesty or breach of the standards of academic integrity is serious and students will be held accountable for their actions, whether acting alone or in a group. See policy S2017-05 for more information: <https://www.capilanou.ca/about-capu/governance/policies/>

Violations of academic integrity, including dishonesty in assignments, examinations, or other academic performances, are prohibited and will be handled in accordance with the Student Academic Integrity Procedures.

Academic dishonesty is any act that breaches one or more of the principles of academic integrity. Acts of academic dishonesty may include but are not limited to the following types:

Cheating: Using or providing unauthorized aids, assistance or materials while preparing or completing assessments, or when completing practical work (in clinical, practicum, or lab settings), including but not limited to the following:

- Copying or attempting to copy the work of another during an assessment;
- Communicating work to another student during an examination;
- Using unauthorized aids, notes, or electronic devices or means during an examination;
- Unauthorized possession of an assessment or answer key; and/or,
- Submitting of a substantially similar assessment by two or more students, except in the case where such submission is specifically authorized by the instructor.

Fraud: Creation or use of falsified documents.

Misuse or misrepresentation of sources: Presenting source material in such a way as to distort its original purpose or implication(s); misattributing words, ideas, etc. to someone other than the original source; misrepresenting or manipulating research findings or data; and/or suppressing aspects of findings or data in order to present conclusions in a light other than the research, taken as a whole, would support.

Plagiarism: Presenting or submitting, as one's own work, the research, words, ideas, artistic imagery, arguments, calculations, illustrations, or diagrams of another person or persons without explicit or

accurate citation or credit.

Self-Plagiarism: Submitting one's own work for credit in more than one course without the permission of the instructors, or re-submitting work, in whole or in part, for which credit has already been granted without permission of the instructors.

Prohibited Conduct: The following are examples of other conduct specifically prohibited:

- Taking unauthorized possession of the work of another student (for example, intercepting and removing such work from a photocopier or printer, or collecting the graded work of another student from a stack of papers);
- Falsifying one's own and/or other students' attendance in a course;
- Impersonating or allowing the impersonation of an individual;
- Modifying a graded assessment then submitting it for re-grading; or,
- Assisting or attempting to assist another person to commit any breach of academic integrity.

Sexual Violence and Misconduct

All Members of the University Community have the right to work, teach and study in an environment that is free from all forms of sexual violence and misconduct. Policy B401 defines sexual assault as follows:

Sexual assault is any form of sexual contact that occurs without ongoing and freely given consent, including the threat of sexual contact without consent. Sexual assault can be committed by a stranger, someone known to the survivor or an intimate partner.

Safety and security at the University are a priority and any form of sexual violence and misconduct will not be tolerated or condoned. The University expects all Students and Members of the University Community to abide by all laws and University policies, including the [Misconduct Policy and B.401.1 Sexual Violence and Misconduct Procedure](#).

Emergencies: Students are expected to familiarise themselves with the emergency policies where appropriate and the emergency procedures posted on the wall of the classroom.