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**
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 bases on new findings.

COURSE CONTENT

Week 1: Introduction to arguments
Week 2: The language of arguments
Week 3: Deductive arguments; validity; symbolization of argument patterns
Week 4: Inductive arguments and fallacies
Week 5: Test 1
Week 6: Argument forms presented symbolically: Statistical syllogisms
Week 7: Argument forms continued. Arguments from analogy; Inductive generalizations
Week 8: Causal arguments: Mill's Methods
Week 9: Test 2
Week 10: Common causal fallacies. Necessary and sufficient conditions
Week 11: The Rules of Probability; the Prisoner's dilemma
Week 12: Decision theory
Week 13: The hypothetico-deductive method; Bayes' theorem
Week 14: Final exam period
Week 15: Final exam period
EVALUATION PROFILE
Participation: 10%
Tests: 55-70%
Final exam: 20-35%

100%
No single assignment will be worth more than 35%.

Full marks for participation require that students are present and actively engaged in all class activities.

GRADING PROFILE

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<thead>
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<th>Grade</th>
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<td>F</td>
<td>0-49</td>
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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.

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: http://www.capilanou.ca/services/

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: http://www.capilanou.ca/about/governance/policies/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 B.401 Sexual Violence and 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.