

COMSC 172, Formal Systems and Logic in Computing Science

3 credits, 3 hours lecture, 1.5 hour lab, 1 hour tutorial

Instructor Said El-Mejdani

Office location: CC244

Phone number : 7807918997

Email Address: Said.elmejdani@keyano.ca

Course Description

An introductory course to present the tools of set theory, logic and induction, and their use in the practice of reasoning about algorithms and programs, basic set theory, the notion of a function, and counting. Propositional and predicate logic and their proof system will be studied. Inductive definitions and proofs by induction will be covered along with program specification and correctness.

Course Learning Outcomes (CLOs)

Upon successful completion of the course, the student shall be able to:

CLO1 demonstrate basic knowledge of set theory, logic and induction, and their use in the practice of reasoning about algorithms and programs.

CLO2 implement these concepts by writing simple programs in a programming language such as SageMath/Python

Evaluation

Assessment Type	Percentage
Assignments, Quizzes and projects	20%
Labs Assignments	15%
Mid Term Exams	20%
Final Exams	45%

Course Completion Requirements

Minimum passing mark of 50% or D is required.

Grading Scale

4.0 Grade Scale	Alpha Grade	Percentage Grade
4.0	A+	93-100
4.0	A	85-92.9
3.7	A-	80-84.9
3.3	B+	77-79.9
3.0	B	74-76.9
2.7	B-	70-73.9
2.3	C+	67-69.9
2.0	C	64-66.9
1.7	C-	60-63.9
1.3	D+	55-59.9
1.0	D	50-54.9
0.0	F	0-49.9

Land Acknowledgement

We respectfully acknowledge that Keyano College is located on Treaty 8 territory, the traditional & contemporary meeting grounds and gathering places of the Denesuline, Cree and Métis Peoples of this region. Our name, Keyano (kiyânaw in nêhiyawêwin - Cree language), translates to “we, us, our” and speaks to the connection we have as a community and our commitment to being in right relationships with the First Peoples of these lands.

Every effort has been made to ensure that information in this course outline is accurate at the time of publication. Keyano College reserves the right to change courses if it becomes necessary so that course content remains relevant. In such cases, the instructor will give the students clear and timely notice of the changes.

Keyano College reserves the right to modify the syllabus, curriculum, or schedule of any course/program, or to cancel a course/program entirely, at any time and for any reason. Such changes may be necessary due to unforeseen circumstances, regulatory requirements, or to ensure the highest quality of education.

Students will be notified of any significant changes as soon as possible. Keyano College is not responsible for any inconvenience or disruption caused by these changes. It is the responsibility of the students to stay informed about any updates or modifications to their courses.

All Rights Reserved: No part of this course outline may be reproduced or resold without Keyano College's written permission.

Course Outline Review Date: June 2025