

Math 162 Technical Mathematics for Computing

This course is designed for students in the Computer Technology Program at Camosun College. Topics include: Introduction to Logic, Laws of Logic, Conditional Statements, Algebra of Sets, Logic Circuits, Boolean Algebra, Karnaugh Maps, Logical Inference and Direct Proofs, Indirect Proofs, Induction, Counting Techniques, Introduction to Probability, Introduction to Statistics, Pictures of Data, Measures of Central Tendency, Measures of Variation, Interpretations of Standard Deviation, Expected Value, the Binomial Distribution, and the Normal Probability Distribution.

Instructor: Raymond Lai
e-mail: lai@camosun.bc.ca **Web Site:** <http://www.camosun.bc.ca/~lai>
Office: Room CBA 152 **Phone:** (250) 370-4491
Reference web site: <http://www.camosun.bc.ca/~trushel/math162>
Office hours: As posted or by appointment

	Monday	Tuesday	Wednesday	Thursday	Friday
08:30-09:20					
09:30-10:20					
10:30-11:20					
11:30-12:20					
12:30-13:20	Lecture	Lecture		Lecture	Lecture
13:30-14:20					
14:30-15:20					
15:30-16:20					

Organization

In-class workload: 4 hours lecture
 Out-of-class workload: 4 to 8 hours per week
 Prerequisites: Math 12 or MATH 173 or MATH 179 or assessment

Texts (Bring the texts to the class)

Trushel, Peter J. and Chi-Ming Leung, *Math 162 Logic and Statistics*, Camosun College bookstore 2000.
 Trushel, Peter J. and Chi-Ming Leung, *Math 162 Logic Student Workbook*, Camosun College bookstore 2000.
 (Optional) Raymond Lai, *Math 162 Solution Key*, Camosun College bookstore 2002.

Assignment: As soon as we finish a section, try the exercises in the texts. They do not contribute directly to the final mark, but questions on the tests and final exam. will be similar to these exercises.

Test: There will be 4 tests (Monday Oct. 7, Monday Oct. 28, Monday Nov. 18 and Monday Dec. 2). They count for 50% of the final mark. There is NO makeup. Medical excuse must be accompanied by your physician's note.

Final Exam: This counts for 50% of the final mark. There is NO makeup.

Assessment

4 Term Tests: 50% of Final Mark

Final Exam: 50% of Final Mark

If final exam mark is higher than the term mark, final exam is taken as 100% of mark.

Percentage to Letter Grade Conversion

Percentage	Letter Grade
95 to 100	A+
90 to 94	A
85 to 89	A-
80 to 84	B+
75 to 79	B
70 to 74	B-
65 to 69	C+
60 to 64	C
50 to 59	D
below 50	F

Hints:

1. Attend all classes.
2. Start working on the exercises as soon as a section is covered.
3. Studying in groups is an efficient way to learn mathematics; on the other hand, learn to solve problems yourself.
4. Interurban Math Lab: Technology Centre TEC142. This drop-in centre is freely available for your use to work on math homework and to seek help from the tutor on staff (see hours posted on door).

Name	Phone No.	Name	Phone No.

Math 162 outline

Logic Topics

Hours	Reference (week)	Topic
2	logic 1(1)	Introduction to Logic
1	logic 2(1)	Laws of Logic
2	logic 3(1)	Conditional Statements
2	logic 4(2)	Algebra of Sets
1	logic 5(2)	Logic Circuits
2	logic 6(3)	Boolean Algebra
1	logic 7(3)	Karnaugh Maps
2	logic 8(4)	Logical Inference and Direct Proofs
2	logic 9(4)	Indirect Proofs
2	logic 10(5)	Induction

Statistics and Probability Topics

Hours	Reference (week)	Topic
2	stats 1(5)	Counting Techniques
2	stats 2(6)	Introduction to Probability
1	stats 3(7)	Introduction to Statistics
2	stats 4(7)	Pictures of Data
2	stats 5(7)	Measures of Central Tendency
2	stats 6(8)	Measures of Variation
2	stats 7(9)	Interpretations of Standard Deviation
2	stats 8(9)	Expected Value
2	stats 9(10)	Binomial Distribution
2	stats 10(10)	The Normal Probability Distribution