

Camosun College Math Department

Math 162 – Technical Mathematics for Computing Q1, 2002/2003

Course description: Topics: logic, inference, predicate logic, mathematical induction, set theory, combinatorics, probability, expectation, measures of central tendency and dispersion, normal distribution, statistical inference.

Prerequisite: Math 12 or MATH 173 or 179 or assessment.

Instructor: Patricia Wrean (Pat)

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Office Hours: Monday – Thursday 12:30 – 1:20
Friday 11:30 – 12:20

On Wednesdays and Thursdays, office hours will be held in Tech 222 as a drop-in session. Bring your lunch, if you like!

Grade Calculation:

The final grade will be calculated according to the following breakdown:

Quizzes (4 or 5)	50%
Final exam	50%

Note: The lowest quiz grade will be dropped when calculating the average of your quizzes. This allows a student to be absent on any one quiz day for any reason, including illness, without penalty. There is no provision for “making up” a missed quiz.

Note: If your final exam grade is higher than your term quiz grade, then your final exam grade will count as 100% of your final grade.

Materials required:

Trushel, Peter J. and Chi-Ming Leung, *Math 162 Logic*, Camosun College bookstore 2000.

Trushel, Peter J. and Chi-Ming Leung, *Math 162 Statistics*, Camosun College bookstore 2000.

(Optional) Raymond Lai, *Math 162 Solution Key*, Camosun College bookstore 2001.

Study Time:

It is recommended that between 5 and 10 hours per week (or more for students with a weak background) be spent studying for this course outside of class time.

Math Room:

Technologies Centre (TEC) 142 (phone: 370-4492): 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).

Grade Scale:

Final letter grades are normally assigned as follows (subject to the conditions above):

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

Course Outline:

Logic Topics

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

Statistics and Probability Topics

Hours	Reference (week)	Topic
2	stats 1(6)	Counting Techniques
2	stats 2(6)	Introduction to Probability
1	stats 3(7)	Introduction to Statistics
2	stats 4(8)	Pictures of Data
2	stats 5(8)	Measures of Central Tendency
2	stats 6(9)	Measures of Variation
2	stats 7(9)	Interpretations of Standard Deviation
2	stats 8(10)	Expected Value
2	stats 9(10)	Binomial Distribution
2	stats 10(11)	The Normal Probability Distribution

Review