

### School of Access Department of Mathematics & Statistics MATH 172 X02 Basic Technical Mathematics 1 Quarter 1 2015

# **COURSE OUTLINE**

The course description is online @ http://camosun.ca/learn/calendar/current/web/math.html

Ω Please note: the College electronically stores this outline for five (5) years only. It is strongly recommended you keep a copy of this outline with your academic records. You will need this outline for any future application/s for transfer credit/s to other colleges/universities.

(a)	Instructor:	Crystal Lomas
(b)	Office Hours:	2:30-3:20 Mon, Wed, Thurs 11:30-12:20 Tues 10:30-11:20 Fri
(c)	Location:	CC 118A
(d)	Phone:	250-370-4463 (email preferred)
(e)	Email:	LomasC@camosun.bc.ca
(f)	Website (D2L):	http://online.camosun.ca

### 1. Instructor Information

### 2. Intended Learning Outcomes

Upon completion of this course the student will be able to:

- 1. Demonstrate basic numeracy by performing arithmetic without a scientific calculator.
- Use set notation to find the union and intersection of two or more sets. Define and identify real, rational, irrational, integer, whole, and natural numbers. Graph intervals of real numbers on the number line. Use the properties of real numbers to perform arithmetic operations and evaluate expressions.
- 3. Solve linear equations and inequalities in one variable. Solve and graph compound inequalities. Solve and graph absolute value equations and inequalities. Solve word problems involving linear equations in one variable.
- 4. Graph linear equations and inequalities in two variables. Calculate the slope and y-intercept of a line. State the equation of a line in point-slope, slope-intercept, and standard form.
- 5. Solve systems of linear equations in two and three variables by graphing, substitution, and the addition method. Solve word problems involving systems of linear equations.
- 6. Express real numbers in scientific notation. Use the power rules to evaluate expressions with integral exponents. Define the term polynomial and multiply polynomials together. Factor polynomials, and solve equations and word problems involving factoring.
- 7. Use the properties of rational expressions to simplify terms. Perform arithmetic operations on rational expressions. Simplify complex fractions. Divide polynomials using long division. Solve equations and word problems involving rational expressions.
- 8. Perform arithmetic operations with radicals. Take quotients and powers of terms involving radicals and rational exponents. Rationalize denominators. Solve equations with radicals and exponents. Perform arithmetic operations on complex numbers, including rationalizing the denominator.
- 9. Solve quadratic equations by factoring, by completing the square, and by using the quadratic formula. Solve word problems involving quadratic equations.

# 3. Required Materials

- (a) **Textbook:** M. Dugopolski, *Intermediate Algebra*, 7<sup>th</sup> Edition, McGraw-Hill, Boston, 2012. The 3<sup>rd</sup> through 6<sup>th</sup> editions are also acceptable.
- (b) **Calculator: No calculators** are permitted and the use of any electronic device during quizzes or the final exam is not allowed.

### 4. Course Content and Schedule

We will cover Chapters 1-8 in the textbook. The *approximate, tentative* schedule of topics can be found (and printed, if you like) on the D2L site in the Content section.

### 5. Basis of Student Assessment (Weighting)

### Grade Calculation

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

Quizzes (5):	40% total
Assignments (~9):	10% total
Final Exam:	50%

If your final exam grade is higher than your term work grade and your term work is **50% or higher**, then your final exam grade will count as 100% of your final grade.

### Final Exam

The final exam will cover the entire course and will be 3 hours long. As stated in the current college calendar, "students are expected to write tests and final examinations at the scheduled time and place." Exceptions will only be considered due to **emergency** circumstances as outlined in the calendar. The calendar specifically states that "holidays or scheduled flights are not considered to be emergencies."

#### Quizzes

There will be five quizzes. 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.

#### Assignments

There will be approximately 9 assignments. The lowest assignment grade will be dropped when calculating the average of your assignments. This allows a student to miss any one assignment for any reason, including illness, without penalty. Late assignments will not be accepted.

### Late Policy

Assignments are due in class on the date specified. Late assignments will not be accepted.

### **Collaboration Policy**

Students are encouraged to collaborate (work together) on assignments. However, you must be prepared to answer similar questions on your own for the quizzes, so it is vital that you understand all of the work that you turn in. Please familiarize yourself with the *Student Guidelines for Academic Integrity*, which will be handed out in class and is posted in the Content section of D2L.

# 6. Grading System

# Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	А		8
80-84	A-		7
77-79	B+		6
73-76	В		5
70-72	B-		4
65-69	C+		3
60-64	С		2
50-59	D	Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite.	1
0-49	F	Minimum level has not been achieved.	0

# **Temporary Grades**

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at **camosun.ca** for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete</i> : A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress</i> : A temporary grade assigned for courses that, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. (For these courses a final grade will be assigned to either the 3 <sup>rd</sup> course attempt or at the point of course completion.)
cw	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

# 7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

### LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services, or the College web site at <u>camosun.ca</u>.

# STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services, and the College web site in the Policy Section.

# ACADEMIC PROGRESS POLICY

There is an Academic Progress Policy designed to enhance a learner's likelihood of success. Students should become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Policy Section.

http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.1.pdf

### 8. Other Information

### Extra Help

You can get **free face-to-face tutoring** from our instructional assistant in the Math Lab **TEC 142.** Hours are posted on the lab doors and on the web <u>http://camosun.ca/services/help-</u>centres/math.html.

### D2L

This class has the assistance of **Desire2Learn (D2L)**, an online course management system. All course related materials, grades, and announcements (including any changes to test dates or due dates) will be available on D2L. It is your responsibility to ensure you have access to D2L and to check it regularly.

### Academic Integrity

The Department of Mathematics and Statistics has prepared a "red handout" called *Student Guidelines for Academic Integrity* to help you interpret college policies involving student conduct, academic dishonesty, plagiarism, etc. It is your responsibility to become familiar with the contents of the document and the college policies it references.

### **Class Notes**

Skeleton notes will be available on D2L prior to class time. Filled-in notes will be posted on D2L at some point after class time. You may print the blank notes or bring them to class on an electronic device if you wish. If you remember things best by copying them out by hand, then please do so before or after class; otherwise, you may find yourself falling behind the class discussion!