



CAMOSUN COLLEGE
School of Access
Community Learning Partnerships

MATH 057
Intermediate Math for Trades

2016 Fall

COURSE OUTLINE

The calendar description is available on the web at <http://www.camosun.ca/learn/calendar/current/>

W Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.

1. Instructor Information

(a) Instructor	Aubrey Bebar
(b) Office hours	By student request
(c) Location	CELÁSET program site
(d) Phone	N/A
(e) E-mail	bebara@camosun.ca
(f) Website	N/A

Alternative: Facebook messenger

2. Intended Learning Outcomes

- use mathematics at an ABE Intermediate level with competence
- demonstrate knowledge and skills in using the language, principles, and operations of introductory algebra and trigonometry
- apply a variety of strategies in solving math-related problems
- apply knowledge and skills in introductory algebra and trigonometry to solve problems
- use knowledge of introductory algebra and trigonometry as a basis for further study in the Electrical Foundation program, Advanced-level mathematics, and other courses and programs

3. Required Materials

- (a) textbook: *Developmental Mathematics*, 8th edition, Marvin Bittinger/Judith Beecher
- (b) module: *Trigonometry (ABE Intermediate Mathematics module 14)*, British Columbia
- (c) module: *Vectors* (Camosun College)
- (d) scientific calculator

Supplementary Materials

- (d) *Student's Solutions Manual*, Judith Penna (for reference in the classroom)
- (e) *Instructor's Solutions Manual*, Judith Penna (for reference in the classroom)

4. Course Content and Schedule

The course completion time will vary for each student, depending on a number of factors, including your current level of math skills, motivation, learning rate, and how much time you have to study math, either at the college or at home. Students generally need to spend 5–15 hours of study time per week to complete each math course within 4 months.

- (a) before starting unit 1, students must pass a competency test to demonstrate that they can add, subtract, multiply, and divide whole numbers, fractions, and decimals without the use of a calculator – if necessary, use the Arithmetic Review booklet to review these operations before writing the competency test
- (b) for each section of the 057 text listed in the table below, read the explanations, study the Examples, do the Margin Exercises, and then work through and check all or at least some of the more difficult odd-numbered problems in the Exercise Set
- (c) note that unit 4 includes text chapter 10, 11.1, & 11.2, and a supplement on exponents
- (d) to prepare for the final test for each unit, do the Summary and Review Exercises and write the Chapter Test at the end of the chapter, and correct all of your errors
- (e) review your final test results with the instructor, and proceed to the next unit if you score 75% or better, or rewrite the final test if you score less than 75% (all test scores count)

Text Section	MATH 057 course content
	Unit R – Arithmetic Review (no calculator)
R.1	Place value
R.2	Comparing numbers
R.3	Rounding numbers
R.4	Adding and subtracting whole numbers and decimals
R.5	Multiplying whole numbers and decimals
R.6	Dividing whole numbers and decimals
R.7	Order of operations
R.8	Operations with fractions
R.9	Equivalent fractions
R.10	Adding and subtracting fractions
R.11	Multiplying fractions
R.12	Dividing fractions
R.13	Converting fractions and decimals
R.14	Estimation
	Unit R final test (no calculator)
	Unit 1 – Real Numbers and Algebraic Expressions (20 days)
7.1	Introduction to algebra
7.2	The real numbers
7.3	Addition of real numbers
7.4	Subtraction of real numbers
7.5	Multiplication of real numbers
7.6	Division of real numbers
7.7	Properties of real numbers
7.8	Simplifying expressions; order of operations
	Summary and review
	Chapter practice test
	Unit 1 final test
	Unit 2 – Solving Equations and Inequalities (30 days)
8.1	Solving equations: the addition principle
8.2	Solving equations: the multiplication principle
8.3	Using the principles together
8.4	Formulas

8.5	Applications of percent
8.6	Applications and problem solving
8.7	Solving inequalities
8.8	Applications and problem solving with inequalities
	Summary and review
	Chapter practice test
	Unit 2 final test
	Unit 3 – Graphs of Linear Equations (22 days)
9.1	Graphs and applications of linear equations
9.2	More with graphing and intercepts
9.3	Slope and applications
9.4	Equations of lines
9.5	Graphing using the slope and y-intercept
	Summary and review
	Chapter practice test
	Unit 3 final test
	Unit 4 – Polynomials: Operations and Factoring (28 days)
10.1*	Integers as exponents
10.2*	Exponents and scientific notation
	* after 10.2, complete supplementary exercises on exponents #1–25
10.3	Introduction to polynomials
10.4	Addition and subtraction of polynomials
10.5	Multiplication of polynomials
10.6	Special products
10.7	Operations with polynomials in several variables
10.8a	Division of polynomials by a monomial
11.1ab	Introduction to common factoring
11.2	Factoring trinomials of the type $x^2 + bx + c$
11.5cd	Factoring differences of squares
	Summary and review
	Chapter practice test
	Unit 4 final test
	MATH 053 review
	MATH 053 final exam day 105
	Unit 5 – Trigonometry (supplementary module) (15 days)
5.1	The right triangle
5.2	Angles and sides
5.3	The Pythagorean theorem (more in 7e text p 1059, 8e text p 1087)
5.4	The tangent ratio
5.5	Using the tangent ratio
5.6	The sine and cosine ratios
5.7	Solving triangles
	Practice test
	Unit 5 final test
	Unit 6 – Vectors (supplementary module) (10 days)
p 10	Problem Sets
	Unit 6 final test day 130

5. Basis of Student Assessment (Weighting)

- (a) **Tests** 75% of the course grade is based on the average of **all** unit final test scores for units 1–6 (including both passing and failing test scores)
- (b) **Exams** 25% of the course grade is based on the average of **all** final exam scores (including both passing and failing exam scores)

Note: Students with a record of poor attendance OR poor progress may be restricted from re-registering in Academic and Career Foundations Department courses.

6. Grading System

Standard Grading System (GPA)

Competency Based Grading System

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, Student Services or the College web site at <http://www.camosun.bc.ca>

STUDENT CONDUCT POLICY

There is a Student Conduct Policy. It is the student's responsibility to 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://www.camosun.bc.ca/policies/policies.html>

A. GRADING SYSTEMS <http://www.camosun.bc.ca/policies/policies.php>

The following two grading systems are used at Camosun College:

1. Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course, practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

B. 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 at <http://www.camosun.bc.ca/policies/E-1.5.pdf> 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 are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
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.