Welcome to Camosun College!

Camosun College campuses are located on the traditional territories of the Lkwungen and W̱SÁNEĆ peoples. We acknowledge their welcome and graciousness to the students who seek knowledge here.

School of Access - Academic and Career Foundations Department

MATH 057 RD08 Math for Electrical Trades

COURSE OUTLINE

The Approved Course Description is available on the College website
http://camosun.ca/learn/calendar/current/web/math.html

1. Instructor Information

Instructor: Zahra Khimji
Office: Interurban: CBA 150

Phone: 250-370 – 4911
Email: KhimjiZ@camosun.bc.ca

The Approved Course Description is available on the College website *http://www.camosun.ca/learn/calendar/current/*

Math 057 Fall 2020 Schedule: September 8th – December 14, 2020.

Time	Tuesday	Thursday
8:30 -11:30 AM	Math 057 Online	Math 057 Online

To arrange office meetings, please email Zahra at KhimjiZ@camsosun.bc.ca

2. Intended Learning Outcomes

At the end of the course, students will be able to:

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

3. Required Materials

(a) textbook: *Developmental Mathematics*, Custom Edition for Camosun College, Marvin Bittinger/Judith Beecher (Content taken from the 9th Edition of *Developmental Mathematics* by the same authors*)*
(b) *Unit R Arithmetic Review* booklet
(c) module: Trigonometry *(ABE Intermediate Mathematics* module 14*)*, British Columbia
(d) module: Vectors (Camosun College)
(d) scientific calculator (Sharp EL-531X or EL-531W for next level MATH 072 or 135)
Supplementary Materials
(e) *Student's Solutions Manual*, Judith Penna

(for sale in the bookstore; available for reference in the classroom)

(f) *Instructor's Solutions Manual*, Judith Penna (for reference in the classroom)

(g) additional math 057 materials can be found here: https://sites.camosun.ca/acf-math/math-057/

(h) website *www.mymathlab.com* (online text, tutorials, videos, and testing)

4. Course Content and Schedule

Self-paced Instructions

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 (calculators are not allowed for parts of MATH 072 and 172) – 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)

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	
	Practice Test	
	Unit R final test (no calculator)	
9th & 8th Ed	MATH 057 course content	
	Unit 1 – Real Numbers and Algebraic Expressions (for 4-month completion: 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 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 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	
	Summary and review	
	Chapter 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 difference of squares	
	Summary and review	
	Chapter test	
	Unit 4 final test	
	MATH 053 review	
	MATH 053 final exam day 105	
9th & 8th Ed	**MATH 057 course content**	
	Unit 5 – Trigonometry (supplementary module) (25 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)	
p 10	Problem Sets	

Vectors Final Test	day 130	

5. Basis of Student Assessment

(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 low attendance OR lack of progress may be restricted from re-registering in Academic and Career Foundations Department courses.

6. Grading System – Standard Grading System http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf

A+	90–100%	B+	77–79%	C+	65–69%	D	50-59%
A	85–89%	B	73–76%	C	60–64%	F	40-49%
A−	80–84%	B−	70–72%	IP	in progress		

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://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf

for information on conversion to final grades, and for additional information on student record and transcript notations.

7. Learning Support and Services for Students

ACADEMIC UPGRADING HELP CENTRE (CBA 109 or Ewing 342)

http://camosun.ca/services/help-centres/math.html

Help with coursework, reference & learning materials library,

computers & printers, quiet testing & study areas

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8. College Supports, Services and Policies

Immediate, Urgent, or Emergency Support
If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ http://camosun.ca/about/mental-health/emergency.html or http://camosun.ca/services/sexual-violence/

College Services
Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **S T U D E N T   S E R V I C E S** link on the College website at http://camosun.ca/services/

College Policies
Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at http://camosun.ca/about/policies/. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.