CAMOSUN COLLEGE
School of Access
Academic and Career Foundations Department

MATH 057   Intermediate Math for Trades

Fall 2015(September 8, 2015 to December 18, 2015)

S06

COURSE OUTLINE

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

1. Instructor Information

(a) Instructor: Augustin Rusekampunzi_____

(b) Office(CBA 108) hours: Monday(M) and Wednesday(W) ---1550 to 1650

(c) Extra Help or office hours: M and W 1955 to 2055 in CBA 117/109 /108

(d) Class Location/ Time : Interurban Campus (CBA 117) / M and W 1700 to 1950

(e) Phone: 250 370 4489

(f) E-mail: ruse@camosun.bc.ca _____

2. Intended Learning Outcomes

(complete ABE Intermediate Mathematics learning outcomes at ABE Articulation Handbook website http://www.aved.gov.bc.ca/abe/docs/handbook.pdf)

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 Foundation program, Advanced-level mathematics, and other courses and programs

3. Required Materials

- (a) textbook: *Developmental Mathematics*, 6th/7th/8th edition, Marvin Bittinger/Judith Beecher
- (b) module: Trigonometry *(ABE Intermediate Mathematics* module 14*)*, British Columbia
- (c) 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) website *www.mymathlab.com* (online text, tutorials, videos, and testing)

4. Course Instructions and Content

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 <u>without the use of a calculator</u> – 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)

8th ed'n	7th ed'n	MATH 057 course content		
		Unit R – Arithmetic Review (no calculator)		
R.1	R.1	Place value		
R.2	R.2	Comparing numbers		
R.3	R.3	Rounding numbers		
R.4	R.4	Adding and subtracting whole numbers and decimals		
R.5	R.5	Multiplying whole numbers and decimals		
R.6	R.6	Dividing whole numbers and decimals		
R.7	R.7	Order of operations		
R.8	R.8	Operations with fractions		
R.9	R.9	Equivalent fractions		
R.10	R.10	Adding and subtracting fractions		
R.11	R.11	Multiplying fractions		
R.12	R.12	Dividing fractions		
R.13	R.13	Converting fractions and decimals		
R.14	R.14	Estimation		
		Practice Test		
		Unit R final test (no calculator)		
		Unit 1 – Real Numbers and Algebraic Expressions (20 days)		
7.1	7.1	Introduction to algebra		
7.2	7.2	The real numbers		
7.3	7.3	Addition of real numbers		
7.4	7.4	Subtraction of real numbers		
7.5	7.5	Multiplication of real numbers		
7.6	7.6	Division of real numbers		
7.7	7.7	Properties of real numbers		
7.8	7.8	Simplifying expressions; order of operations		
		Summary and review		
		Chapter test		
		Unit 1 final test		

8th ed'n	7th ed'n	MATH 057 course content		
		Unit 2 – Solving Equations and Inequalities (30 days)		
8.1	8.1	Solving equations: the addition principle		
8.2	8.2	Solving equations: the multiplication principle		
8.3	8.3	Using the principles together		
8.4	8.4	Formulas		
8.5	8.5	Applications of percent		
8.6	8.6	Applications and problem solving		
8.7	8.7	Solving inequalities		
8.8	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	9.1	Graphs and applications of linear equations		
9.2	9.2	More with graphing and intercepts		
9.3	9.3	Slope and applications		
9.4	9.4	Equations of lines		
9.5	9.5	Graphing using the slope and y-intercept		
		Summary and review		
		Chapter test		
		Unit 3 final test		
		Unit 4 – Polynomials: Operations and Factoring (28 days)		
10.1*	10.1*	Integers as exponents		
10.2*	10.2*	Exponents and scientific notation		
		* after 10.2, complete supplementary exercises on exponents #1−25		
10.3	10.3	Introduction to polynomials		
10.4	10.4	Addition and subtraction of polynomials		
10.5	10.5	Multiplication of polynomials		
10.6	10.6	Special products		
10.7	10.7	Operations with polynomials in several variables		
10.8a	10.8a	Division of polynomials by a monomial		
11.1ab	11.1ab	Introduction to common factoring		
11.2	11.2	Factoring trinomials of the type $x^2 + bx + c$		
11.5cd	11.5cd	Factoring differences of squares		
		Summary and review		
		Chapter test		
		Unit 4 final test		
		MATH 053 review and final exam day 105		
		Unit 5 – Trigonometry (supplementary module) (15 days)		
5.1	5.1	The right triangle		
5.2	5.2	Angles and sides		
5.3	5.3	The Pythagorean theorem (more in 7e text p 1059, 8e text p 1087)		
5.4	5.4	The tangent ratio		
5.5	5.5	Using the tangent ratio		
5.6	5.6	The sine and cosine ratios		
5.7	5.7	Solving triangles		
		Practice test		
		Unit 5 final test		
		Unit 6 − Vectors (supplementary module) (10 days)		
p 10	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

A+	90−100%	B+	77−79%	C+	65−69%
A	85−89%	B	73−76%	C	60−64%
A−	80−84%	B−	70−72%	IP	in progress

7. Learning Support and Services for Students

ACADEMIC UPGRADING HELP CENTRE (E 342)

Help with coursework, reference & learning materials library,
computer & printer, quiet testing & study areas

There are many other Camosun services available to help you succeed in and out of the classroom, including education planning, learning and personal support, campus life, work and housing, and getting around. This information is available at Registration or the College web site http://camosun.ca/services/

8. College Policies

ACADEMIC PROGRESS

The purpose of this policy is to enhance a learner's likelihood of success, and to encourage the learner to use College resources effectively.

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

GRADING

The purpose of this policy is to ensure that grading and promotion are consistent and fair.

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

STUDENT CONDUCT

The purpose of this policy is to provide clear expectations of appropriate academic and non-academic student conduct, and to establish processes for resolution of conduct issues or the imposition of sanctions for inappropriate conduct.

http://camosun.ca/about/policies/education-academic/e-2-student-services-&-support/e-2.5.pdf