CAMOSUN COLLEGE
School of Access
Academic and Career Foundations Department

MATH 053 Intermediate Mathematics 2
Fall 2012 (September 4 – December 7)Section S09

COURSE OUTLINE

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

✞ *Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records.*

1. Instructor Information

(a) Instructors: Richard Zajchowski

(b) Office hours: 3:30 pm Tue/Thu E342; by appointment or drop-in: 3:30-5 pm Mon/Wed CBA 110/117, other times available

(c) Help Centre hours: 3:30 pm Tue/Thu E342

(d) Location: Interurban & Lansdowne Campus

(e) Phone: (250) 370-4915

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

(g) Website

2. Intended Learning Outcomes

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

3. apply a variety of strategies in solving math-related problems

4. apply knowledge and skills in introductory algebra to solve problems

5. use knowledge of introductory algebra as a basis for further study in Advanced-level algebra, math for technology, and other courses and programs

3. Required Materials

(a) textbook: *Developmental Mathematics*, 6th/7th/8th edition, Marvin Bittinger/Judith Beecher
(b) scientific calculator (Sharp EL531 for MATH 072)

Supplementary Materials

(c) *Student's Solutions Manual*, Judith Penna
(for sale in the bookstore; available for reference in the classroom)
(d) *Instructor's Solutions Manual*, Judith Penna (for reference in the classroom)
(e) video CDs (cover each section of the text, for viewing at the college or at home)
(f) 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 – if necessary, use the Arithmetic Review booklet to review these operations before writing the competency test
(b) for each section of the 053 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)
(f) note: calculators are not allowed for parts of MATH 072 and for all of MATH 172, so 053 students who intend to take either of these courses should be able to add, subtract, multiply, and divide with whole numbers, fractions, and decimals, without the use of a calculator.

8th ed'n	7th ed'n	MATH 053 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)		

8th Ed.	7th Ed.	Math 053 Course Content		
		Unit 1 – Real Numbers and Algebraic Expressions (for 4-month completion: 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		
		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		
		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		
10.8	10.8	Division of polynomials		
11.1	11.1	Introduction to factoring		
11.2	11.2	Factoring trinomials of the type $x^2 + bx + c$		
		Summary and review		
		Chapter test		
		Unit 4 final test		
		MATH 053 review		
		MATH 053 final exam day 105		

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 1−4 (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. 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, Registration, or on the College website *http://camosun.ca/services/*

ACADEMIC CONDUCT POLICY

It is the student's responsibility to become familiar with the content of the Academic Conduct Policy. The policy is available in each School Administration Office, Registration, and on the College website *http://camosun.ca/about/policies/education-academic/e-2-student-services-&-support/e-2.5.pdf*

ACADEMIC PROGRESS POLICY

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