CAMOSUN COLLEGE
School of Access
Community Learning Partnerships Department

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.

Math 072 Advanced Mathematics 1
Fall 2019

COURSE OUTLINE

The calendar description is available on the web @   http://camosun.ca/learn/calendar/current/web/math.html

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

1. Instructor Information

(a)	**Instructor**	Wendy Seward
(b)	**Office hours**	By appointment
(c)	**Location**	SAEC
(d)	**Phone**	**Alternative:**
(e)	**E-mail**	sewardw@camosun.ca
(f)	**Website**	

2. Intended Learning Outcomes
Successful completion of Math 072 awards 4 credits.

Complete ABE Advanced Mathematics learning outcomes at ABE Articulation Handbook website
https://www2.gov.bc.ca/assets/gov/education/post-secondary-education/adult-education/abe_guide.pdf
*(After completion of Math 072 **and** 073, students will meet the outcomes as identified in the 2017- 2018 Adult Basic Education Articulation Handbook)*

On completion of the course, students will be able to:

1. Demonstrate basic numeracy skills by performing mathematical operations on real numbers including absolute value and exponents, with and without scientific calculators.
2. Read and write mathematics at an Adult Basic Education Advanced Level.
3. Solve linear equations and equations involving absolute value. Use formulas and solve formulas for a given variable. Solve linear and compound inequalities and express answers in both set and interval notation.
4. Determine whether or not relations are functions. Evaluate functions. Determine the functions (quadratic, reciprocal and absolute value) using a table of values.
5. Graph linear equations using a variety of strategies. Determine equations of lines given two points or the slope and a point. Model simple real-life problems that require linear equations (for example, finding the size of a fish growing at a fixed rate, determining the cost of a job involving fixed and variable costs).
6. Solve systems of linear equations in two variables by graphing, substitution, and elimination.
7. Determine whether expressions are polynomials. Classify polynomials by degree and type. Add, subtract and multiply polynomials. Factor polynomials completely using a variety of strategies.
8. Use the laws of exponents to simplify expressions containing rational exponents. Convert expressions between radical and exponential form.
9. Solve applied problems including those involving geometry, mixture and money (simple interest, investment, % discount, buying/selling).

Note: A grade of C+ or better is needed for Math 073, 142, 143, or 109. A grade of B or better is needed for Math 139.

3. Required Materials

(a) Textbook: Intermediate Algebra, 13th edition by M. L. Bittinger. (NOTE: Same textbook for 073.)
(b) Scientific calculator: The Sharp EL 531W (or similar)model will be the only calculator allowed for this course

4. Course Content and Schedule
The course is designed to be completed in one term. It can be completed sooner, depending on factors including your beginning level of math skills, motivation, learning rate, and how much time you can actually study (average 15 to 20 hours per week to complete in 4 months).

If you do not understand something, seek help right away. Resources include your instructor, the Math Help Centres, and your family and friends.

Section	Topic	Suggested Time (Days)	Suggested Date	Suggested Week
Math 072 course content				
Unit R: Chapter R	**Just-in-time Review**			
	Pre-test	1	Sep 3	1
	Just-in-time review 1 - 20	10	Sep 4 -14	1,2
	Post-test	2	Sep 15 - 16	3
	Unit R final test		Sep 17	3
Unit 1: Chapter 1	**Solving Linear Equations and Inequalities**			
	Pre-test	1	Sep 18	3
1.1	Solving Equations	2	Sep 19, 20	3
1.2	Formulas and Applications	2	Sep 21, 22	3
1.3	Applications and Problem Solving	2	Sep 23, 24	4
1.4	Sets, Inequalities, and Interval Notation	3	Sep 25 - 27	4
1.5	Intersections, Unions, and Compound Inequalities	2	Sep 28, 29	4
1.6 a-d	Absolute-Value Equations	3	Sep 30 – Oct 2	4, 5
	Post-test	2	Oct 3, 4	5
	Unit 1 final test		Oct 3, 4	5
Unit 2: Chapter 2	**Graphs, Functions, and Applications**			
	Pre-test	1	Oct 5	5
2.1	Graphs of Equations	2	Oct 6, 7	5, 6
2.2	Functions and Graphs	1	Oct 8	6
2.3	Finding Domain and Range	2	Oct 9, 10	6
2.4	Linear Functions: Graphs and Slope	2	Oct 11, 12	6
2.5	More on Graphing Linear Equations	1	Oct 13, 14	6, 7
2.6	Finding Equations of Lines; Applications	3	Oct 15 - 17	7
	Post-test	2	Oct 18, 19	7
	Unit 2 final test		Oct 18, 19	7
Unit 3: Chapter 3	**Systems of Equations**			
	Pre-test	1	Oct 20	7
3.1	Systems of Equations in Two Variables	2	Oct 21, 22	8
3.2	Solving by Substitution	2	Oct 23, 24	8
3.3	Solving by Elimination	2	Oct 25, 26	8
3.4a	Solving Applied Problems	3	Oct 27 - 29	8, 9
3.7 ab	Systems of Inequalities in Two Variables	3	Oct 31 – Nov 1	9
	Post-test	2	Nov 2, 3	9
	Unit 3 final test		Nov 2, 3	9
Unit 4: Chapter 4	**Polynomials and Polynomial Functions**			
	Pre-test	1	Nov 4	10
4.1	Introduction to Polynomials and Polynomial Functions	3	Nov 5 - 7	10
4.2	Multiplication of Polynomials	3	Nov 8 - 10	10
4.3	Introduction to Factoring	3	Nov 11 - 13	11
4.4	Factoring Trinomials: $x^2 + bx + c$	3	Nov 14 - 16	11
4.5	Factoring Trinomials: $ax^2 + bx + c$	3	Nov 17 - 19	11, 12
4.6	Special Factoring	3	Nov 20 - 22	12
4.7	Factoring: A General Strategy	2	Nov 23, 24	12
4.8	Applications of Polynomial Equations and Functions	3	Nov 25 – 27	13
	Post-test	2	Nov 28, 29	13
	Unit 4 final test		Nov 30, Dec 1	13
	Course Final pre-test			
	Course Final post-test		Dec 2 - 4	14
	Final Exam (cumulative)		Dec 5, 6	14

5. Basis of Student Assessment (Weighting)

Five Unit Exams worth 50% | Final Exam worth 50% (You **must** pass final to pass the course. You must write and **pass** all the unit exams before you write the final exam.)

Note: *Students with a record of poor attendance OR poor progress may be restricted from re-registering in Community Learning Partnerships Department courses.*

6. Grading System

(If any changes are made to this part, then the Approved Course description must also be changed and sent through the approval process.)
(Mark with "X" in box below to show appropriate approved grading system – see last page of this template.)

X Standard Grading System (GPA)

☐ Competency Based Grading System

7. Recommended Resources to Assist Students to Succeed Throughout the Course

> **Ask your course instructor FIRST and then you could also go to:**
> **ACADEMIC UPGRADING HELP CENTRES (CBA 109 and E342)**
> http://camosun.ca/services/help-centres/math.html

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 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/get-support.html#urgent

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 **STUDENT SERVICES** link on the College website at http://camosun.ca/

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.

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	*Incomplete*: 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	*In progress*: 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	*Compulsory Withdrawal*: 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.