



School of Access  
 Community Learning Partnerships  
**MATH 072 DS19**  
 Advanced Mathematics 1  
**Course Outline – Winter 2018**

**The Approved Course Description is available on the College website**

<http://camosun.ca/learn/calendar/current/web/math.html>

Ω Please note: the College electronically stores this outline for five (5) years only.  
 It is **strongly recommended** you keep a copy of this outline with your academic records.  
 You will need this outline for any future application/s for transfer credit/s to other colleges/universities.

**Instructor Information and Schedule:**

**Name:** Pooja Gupta  
**Phone:** 250-370-4481

**Email:** [guptap@camosun.ca](mailto:guptap@camosun.ca)  
**Office:** CBA 149

**My class schedule this term:**

	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
<b>9:30 – 12:20</b>	<b>In class</b> Saanich Adult Education Centre	<b>In class</b> Songhees Wellness Centre	<b>In class</b> Saanich Adult Education Centre	<b>In class</b> Songhees Wellness Centre	<b>Online class</b> (9:30 – 1:50) CBA 159  <b>Office time</b>
<b>12:30 – 2:20</b>	<b>Online class/ Office time</b> Meetings by appointments only		<b>Online class/ Office time</b> Meetings by appointments only		Department Meetings

**Important Dates this Winter term:**

- January 8 – Term Starts
- February 12 – Family Day (College closed)
- February 13 to 16 – Reading break (College closed)
- February 13 – Foundation Bursaries Deadline to apply for winter 2018
- February 23 – T2202A Education Tax Receipts available
- March 30 – Good Friday (College closed)
- April 2 – Easter Monday (College closed)
- April 13 – Last day of instruction
- April 16 to 20 – Exams
- April 20 - Term Ends

**Note:** - Please seek help as soon as possible so that I can help you to be successful this term. As emails are accessible from any location, I prefer **emails** to phone calls.



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### **Intended Learning Outcomes**

*Successful completion of Math 072 awards 4 credits.*

Upon completion of this course, the student 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. (Note: 40% of the course does not use 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).

*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. After completion of Math 072 **and** 073, students will meet the outcomes as identified in the 2016-2017 Adult Basic Education Articulation Handbook found at <https://www2.gov.bc.ca/gov/content/education-training/adult-education/adult-upgrading>.*

**Prerequisite(s):** "C" in Principles of Math 10, or Foundations of Math & Pre-calculus 10, or Pre-calculus 11, or Foundations of Math 11, or MATH 053, or MATH 057; or "C-" in Principles of Math 11; or assessment.

<http://camosun.ca/learn/calendar/current/web/math.html>

### **Required Materials:**

- (a) Reliable access to the internet



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- (b) Registration with MyMathLab:  
<http://www.pearsonmylabandmastering.com/northamerica/mathxl/students/get-registered/index.html>
- (c) Course ID: **gupta18465**
- (d) Calculator: The Sharp EL-531W is required for this course.

## Course Content and Schedule

### Self-paced Instructions

The course is designed to be completed in one term. However, it can be completed sooner, depending on a number of factors including the students' beginning level of math-skills, motivation, learning rate, and how much time they can actually study (average 15 20 hours per week to complete in 4 months).

Contact your instructor to get permission to write the Final exam. The Final Exam must be written with an invigilator.

If you do not understand something, seek help right away. In addition to online, resources include your family and friends, your instructor, and /or the Math Help Centres.

### Math Help

You can get free face-to-face tutoring from our instructional assistants in the Math Help Centres/Labs in E224 & E342 (Lansdowne) or TEC142 (Interurban). Hours are posted on the doors and on the website <http://camosun.ca/services/help-centres/>.

Math 072 Course Content				
Section	Topic	Suggested Time (Days)	Suggested Date	Suggested Week
<b>Unit R: Chapter R</b>	<b>Review of Basic Algebra</b>			
	<b>Pre-test</b>	1	Jan 8	1
R.1	Set of Real Numbers	1.5	Jan 8, Jan 9	1
R.2	Operations with Real Numbers	2	Jan 10, Jan 11	1
R.3	Exponential Notation and Order of Operations	2	Jan 12, Jan 15	1
R.4	Introduction to Algebraic Expressions	2	Jan 16, Jan 17	2
R.5	Equivalent Algebraic Expressions	2	Jan 18, Jan 19	2
R.6	Simplifying Algebraic Expressions	2	Jan 22, Jan 23	2, 3
R.7	Properties of Exponents and Scientific Notation	2	Jan 24, Jan 25	3
	<b>Post-test</b>	1	Jan 26	3
	Unit R final test	1	Jan (26-29)	4
<b>Unit 1: Chapter 1</b>	<b>Solving Linear Equations and Inequalities</b>			
	<b>Pre-test</b>	1	Jan 30	
1.1	Solving Equations	2	Jan 30, Jan 31	4
1.2	Formulas and Applications	2	Feb 1, Feb 2	4
1.3	Applications and Problem Solving	2	Feb 5, Feb 6	4
1.4	Sets, Inequalities, and Interval Notation	1	Feb 7	5



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1.5	Intersections, Unions, and Compound Inequalities	2	Feb 8, Feb 9	5
1.6 a-d	Absolute-Value Equations	1	Feb 12	5
	<b>Post-test</b>	1	Feb 13	5
	Unit 1 final test	1	Feb (13-18)	5
<b>Unit 2: Chapter 2</b>	<b>Graphs, Functions, and Applications</b>			
	<b>Pre-test</b>	1	Feb 19	6
2.1	Graphs of Equations	2	Feb 20, Feb 21	6
2.2	Functions and Graphs	1	Feb 22	6
2.3	Finding Domain and Range	2	Feb 23, Feb 26	6/7
2.4	Linear Functions: Graphs and Slope	1	Feb 27	7
2.5	More on Graphing Linear Equations	1	Feb 28	7
2.6	Finding Equations of Lines; Applications	2	Mar 1, Mar 2	7
	<b>Post-test</b>	2	Mar 5	8
	Unit 2 final test	1	Mar (6-11)	8
<b>Unit 3: Chapter 3</b>	<b>Systems of Equations</b>			
	<b>Pre-test</b>	1	Mar 7	8
3.1	Systems of Equations in Two Variables	1	Mar 8	8
3.2	Solving by Substitution	1	Mar 9	8
3.3	Solving by Elimination	1	Mar 12	9
3.4a	Solving Applied Problems	2	Mar 13, Mar 14	9
3.7 ab	Systems of Inequalities in Two Variables	1	Mar 15	9, 10
	<b>Post-test</b>	2	Mar 16	10
	Unit 3 final test	1	Mar (17-18)	10
<b>Unit 4: Chapter 4</b>	<b>Polynomials and Polynomial Functions</b>			
	<b>Pre-test</b>	1	Mar 19	11
4.1	Introduction to Polynomials and Polynomial Functions	2	Mar 20, Mar 21	11
4.2	Multiplication of Polynomials	1	Mar 22	11
4.3	Introduction to Factoring	1	Mar 23	11
4.4	Factoring Trinomials: $x^2 + bx + c$	1	Mar 26	11
4.5	Factoring Trinomials: $ax^2 + bx + c$	2	Mar 27, Mar 28	11, 12
4.6	Special Factoring	3	Mar 29, Apr 3-4	12
4.7	Factoring: A General Strategy	1	Apr 5	12
	<b>Post-test</b>	3	Apr 6	13
	Unit 4 final test	1	Apr (7-8)	13
	<b>Course Final pre-test</b>		Apr 9	
	<b>Course Final post-test</b>	3	Apr (12-13)	13
	<b>Final Exam (cumulative)</b>	1	Apr 18	14

**Grade Calculation:** Five Unit Exams 50%



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Final Exam 50%

**Grading System:**

Percentage	Grade	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
<50%	F	0
In Progress	IP	N/A

**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, Registrar's Office or the College web site at:  
<http://www.camosun.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, or the College web site at:  
<http://camosun.ca/about/policies/education-academic/e-2-student-services-&-support/e-2.5.pdf>



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**STUDENT GRADING POLICY**

A new student grading policy is in effect for students in the School of Access. This information is available in the College Calendar, Registrar's Office or the College web site at:

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

**ACADEMIC PROGRESS POLICY**

There is an 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 web site in the Policy Section or the College web site at:

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