



CAMOSUN COLLEGE
School of Access
Department of Mathematics and Statistics

Math 073 DS01
Advanced Mathematics 2
Fall, 2020

COURSE OUTLINE

The calendar description is available on the web @

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

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

1. Instructor Information

(a) Instructor	Cathy Frost	
(b) Office hours	Open	
(c) Location	Via email	
(d) Phone	N/A	Alternative: _____
(e) E-mail	frost@camosun.bc.ca	
(f) Website	online.camosun.ca	

2. Intended Learning Outcomes

Upon successful completion of the course the student will be able to:

1. Use basic mathematical operations (& factoring) to simplify polynomial expressions and solve polynomial equations and word problems.
2. Perform mathematical operations on rational algebraic expressions and solve equations and word problems involving rational algebraic equations.
3. Divide polynomials using long and synthetic division.
4. Perform mathematical operations on complex numbers.
5. Simplify and perform mathematical operations on square roots (and other roots) involving variables and solve radical equations.
6. Use rational exponents when working with radical expressions to aid in simplifying these expressions.
7. Solve quadratic equations, and solve practical problems involving quadratic type equations using the methods of completing the square, factoring, square root property, and the quadratic formula.
8. Graph and analyze quadratic functions, including finding the vertex, intercepts, axis of symmetry, and maximum or minimum values of the function.
9. Use the definitions of the basic trigonometric functions to find ratios, angles (degree measure only), and solve practical problems involving right triangles.
10. Find the trigonometric ratios of special triangles (exact values), and find the trigonometric function values of any angle in standard position using a scientific calculator.
11. Solve basic trigonometric equations.

12. Use the Law of Sines and the Law of Cosines to solve non-right triangles (oblique), and practical problems involving these triangles.

After completion of Math 072 **and** 073, students will meet the outcomes as identified in the Adult Basic Education Articulation Handbook found at http://www2.gov.bc.ca/assets/gov/education/post-secondary-education/adult-education/2016-17_abe_guide.pdf

3. Required Materials

a) Computer/Tablet/Phone and Internet Access Please contact me if you do not have a device

b) Textbook:

Choose the print textbook or the e-text (both come with the MLM access code). Go to <https://www.camosuncollegebookstore.ca/> and select either:

- Intermediate Algebra W/**Mymathlab** Access LI 13Th Ed (print)
- or Intermediate Algebra Etext W/Integrated Review **Mymathlab** Access (e-text)

Register for **Mymathlab/MyLabMath (MLM)** for the e-text, videoa, assignments and practice tests. Go to <https://www.pearsonmylabandmastering.com/northamerica/mymathlab/students/get-registered/index.html> to register using your access code and the Course ID frost22842. *You can get 14 days of free temporary access.*
Note: There is a supplementary textbook for the Trig section and it is posted on D2L.

c) Calculator: Sharp EL-531 scientific calculator or <https://www.calculator.net/scientific-calculator.html> (free online calculator)

4. Course Content and Schedule

Time	Monday	Tuesday	Wed	Thursday	Friday
5:30-7:50pm	Math 072/073-DS01 Collaborate 5:30-6:30 for 072 primarily 6:30-7:30 for 073 primarily		Math 072/073-DS01 Collaborate 5:30-6:30 for 072 primarily 6:30-7:30 for 073 primarily		

Math 073 covers Chapter 4 through Chapter 7 in the textbook plus a trigonometry section available on D2L:

- Unit 1: Ch 4 Polynomials and Polynomial Functions 4.1-4.8
- Unit 2: Ch 5 Rational Expressions, Equations, Functions 5.1-5.8
- Unit 3: Ch 6 Radical Expressions, Equations, Functions 6.1-6.8
- Unit 4: Ch 7 Quadratic Equations and Functions 7.1-7.7a
- Unit 5: Trigonometry Lessons , supplementary text 6.1*-6.3*, 8.1*-8.2*

Since this is a self-paced course, there will not be a formal lecture. However, I encourage you to check in at the start of every class (6:30pm for Math 073) in Collaborate at <http://online.camosun.ca> so I may tailor the class time to suit your needs. This may include a mini-lecture on a popular topic or individual questions. It may be helpful to set aside the class time and another regular time for studying. To complete the course in one term, you will need to spend at least 8-12 hr/week studying.

Pacing Schedule- to complete Math 073 in one term

This is a self-paced course so this schedule is only a recommendation if you wish to complete the course in one term. Alternately, you can complete the course earlier, or you may want to re-register for another term to complete it. Test marks may be carried forward for up to one year. You can take up to 3 terms to complete a course.

Wk	Date	Monday	Tuesday	Wednesday	Thursday	Friday
1	Sept 7-11	<i>Labour Day Holiday</i>	4.1 Introduction to Polynomials 4.2 Multiplication of Polynomials	4.3 Introduction to Factoring 6:30 Collaborate	4.4 Factoring Trinomials: $x^2 + bx + c$	4.5 Factoring Trinomials: $ax^2 + bx + c$
2	Sept 14-18	4.6 Special Factoring 6:30 Collaborate	4.7 Factoring: A General Strategy	4.8 Applications of Polynomial Equations 6:30 Collaborate	Chapter 4 Practice Test Book Test	Chapter 4 Review
3	Sept 21-25	Chapter 4 Test 6:30 Collaborate	5.1 Rational Expressions: Mult./Div	5.2 LCMs, LCDs, Addition and Subtraction 6:30 Collaborate	5.3 Division of Polynomials	5.4 Complex Rational Expressions
4	Sep 28-Oct 2	5.5 Solving Rational Equations 6:30 Collaborate	5.5 Solving Rational Equations	5.6c Uniform Motion Applications only 6:30 Collaborate	5.7 Formulas and Applications	5.8 Variation and Applications
5	Oct 5-9	Chapter 5 Practice Test Book Test 6:30 Collaborate	Chapter 5 Review	Chapter 5 Test 6:30 Collaborate	6.1 Radical Expressions and Functions	6.2 Rational Numbers as Exponents
6	Oct 12-16	<i>Thanksgiving Holiday</i> No classes	6.3 Simplifying Radical Expressions	6.3 Simplifying Radical Expressions 6:30 Collaborate	6.4 Addition, Subtraction, and More Multiplication	6.5 More on Division of Radical Expressions
7	Oct 19-23	6.5 More on Division of Radical Expressions 6:30 Collaborate	6.6 Solving Radical Equations	6.6 Solving Radical Equations 6:30 Collaborate	6.7 Applications Involving Powers and Roots	6.8 The Complex Numbers
8	Oct 26-30	Chapter 6 Practice Test Book Test 6:30 Collaborate	Chapter 6 Review	Chapter 6 Test 6:30 Collaborate	7.1 Basics of Solving Quadratic Equations	7.1 Basics of Solving Quadratic Equations
9	Nov 2-6	7.2 The Quadratic Formula 6:30 Collaborate	7.3 Applications Involving Quadratic Equations	7.4 More on Quadratic Equations 6:30 Collaborate	7.4 More on Quadratic Equations	7.5 Graphing $f(x) = a(x - h)^2 + k$
10	Nov 9-13	7.5 Graphing $f(x) = a(x - h)^2 + k$ 6:30 Collaborate	7.6 Graphing $f(x) = ax^2 + bx + c$	<i>Remembrance Day</i> No classes	7.6 Graphing $f(x) = ax^2 + bx + c$	7.7a Modeling with Quadratic Functions and Max/Min Problems
11	Nov 16-20	Chapter 7 Practice Test Book Test 6:30 Collaborate	Chapter 7 Review	Chapter 7 Test 6:30 Collaborate	Trig 6.1* Trig Functions of Acute Angles	Trig 6.1* Trig Functions of Acute Angles
12	Nov 23-27	Trig 6.2* Applications of Right Triangles 6:30 Collaborate	Trig 6.3* Trig Functions of Any Angles	Trig 6.3* Trig Functions of Any Angles 6:30 Collaborate	Trig 8.1* The Law of Sines	Trig 8.2* The Law of Cosines
13	Nov 30 - Dec 4	Trig Practice Test Book Test 6:30 Collaborate	Trig Review	Trig Test 6:30 Collaborate	Exam Review	Exam Review
14	Dec 7- Dec 11	Exam Review 6:30 Collaborate	Exam Review	Exam Review 6:30 Collaborate	Exam Practice Test Book Exam	Exam Review
15	Dec 14-17	Final Exam			Last Day to Write Tests/Exam	

*Supplementary textbook for the Trig section is posted on D2L, but assignments/test are on MML.

Tests can be written on Mon or Wed. evenings from 4:00-8:00pm and must be booked at least one business day ahead.

5. Basis of Student Assessment (Weighting)

- (a) **Homework Assignments (20%)** on [MLM](#)
There is an assignment for each chapter. You get three attempts on each question.
- (b) **Practice Tests (10%)** on [MLM](#)
Before each test, you will need to complete the practice test. You get 2 attempts.
- (c) **Chapter Tests – (40%)** on [MLM](#)
After completing all the homework, the practice test, and when you feel ready, book your test by sending me an email noting the day (Mon. or Wed) and time (between 4:00-8:00pm) when you can write it. The test will be loaded onto [MLM](#) within two business days. Show all your work on paper, clearly numbering each question, then enter the answers in [MML](#). Submit your work by scanning it as a single pdf file, then submit it using the Assignment Tool in [D2L](#). You will not receive credit for the test unless satisfactory work is shown.

There are five (equally-weighted) chapter tests. Re-tests are only provided if you score less than 65%. Only one re-test is allowed and the two scores will be averaged. You will need approximately 2 hours to complete each chapter test.

Note: If you have completed Math 072 within the last year, you may be able to use your Math 072 Unit 5 test score as your Math 073 Unit 1 test score. Contact your instructor for details.

- (d) **Final Exam – 30%** on [MLM](#)
There is a cumulative final exam. It covers all of the material from Chapter 4-7 and Trigonometry. When you have completed all the tests and the exam review, and feel that you're ready, please let me know what day (Mon. or Wed) and time (between 4:00-8:00pm) you want to write it. There are no rewrites for the final exam. You will need approximately 3 hours to write the final exam.

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.)

Standard Grading System (GPA)

Competency Based Grading System

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

Supplementary materials are on the websites <http://online.camosun.ca>

Publisher website "MyMathLab": <http://pearsonmylabandmastering.com>

Free tutoring : Please email <mailto:campbellc@camosun.bc.ca> to book a time with our tutors

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	<i>Incomplete:</i> 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	<i>In progress:</i> 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	<i>Compulsory Withdrawal:</i> 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.