# **COURSE SYLLABUS**



COURSE TITLE: Math 073

**CLASS SECTION: DS02** 

TERM: Winter, 2022

COURSE CREDITS: 4

DELIVERY METHOD(S): Online, Self-paced

Camosun College campuses are located on the traditional territories of the Ləkwəŋən and WSÁNEĆ peoples. We acknowledge their welcome and graciousness to the students who seek knowledge here.

Learn more about Camosun's

The COVID-19 pandemic has presented many challenges, and Camosun College is committed to helping you safely complete your education. Following guidelines from the Provincial Health Officer, WorkSafe BC, and the B.C. Government to ensure the health and wellbeing of students and employees, Camosun College is providing you with every possible protection to keep you safe. Our measures include COVID Training for students and employees, health checks, infection control protocols including sanitization of spaces, PPE and ensuring physical distancing. For details on these precautions please follow this

link: <a href="http://camosun.ca/covid19/faq/covid-faqs-students.html">http://camosun.ca/covid19/faq/covid-faqs-students.html</a>. However, if you're at all uncomfortable being on campus, please share your concerns with your Instructor. If needed, alternatives will be discussed.

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable explanation in advance, you will be removed from the course and the space offered to the next waitlisted student.

#### **INSTRUCTOR DETAILS**

NAME: Cathy Frost

EMAIL: <a href="mailto:frost@camosun.bc.ca">frost@camosun.bc.ca</a>

OFFICE: D2L Collaborate

HOURS: Tues & Thur 4:30-5:30pm

As your course instructor, I endeavour to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me. Camosun College is committed to identifying and removing institutional and social barriers that prevent access and impede success.

#### **CALENDAR DESCRIPTION**

This refresher course provides a foundation for the further study of mathematics. Topics include rational and radical expressions and equations, quadratic equations and functions, right triangle trigonometry, trigonometric functions of any angle and the Sine and Cosine Laws.

Prerequisites.

One of:

- C in Pre-calculus 11 or Foundations of Math 12
- C+ in MATH 072
- C in MATH 077
- C+ in MATH 075
- C+ in MATH 135

# COURSE LEARNING OUTCOMES / OBJECTIVES

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 <a href="https://www2.gov.bc.ca/assets/gov/education/post-secondary-education/adult-education/abe\_guide.pdf">https://www2.gov.bc.ca/assets/gov/education/post-secondary-education/adult-education/abe\_guide.pdf</a>

#### REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

- (a) Computer/Tablet/Phone and Reliable Internet Access Please contact me if you do not have a device. It is your responsibility to make sure your internet is working for all assessments. It's beneficial to have a microphone (usually imbedded in your computer).
- (b) Textbook/E-text

You can choose either the print or e-text (both come with the MLM access code)

Print text: Go to https://www.camosuncollegebookstore.ca/

Search for "Intermediate Algebra" (choose loose-leaf or paperback)

E-text: <a href="https://www.camosuncollegebookstore.ca//buy">https://www.camosuncollegebookstore.ca//buy</a> access codes.asp?

Select Math072/073

c) Register for MyLabMath (MLM) This gives you access to the e-text, videos, assignments and practice tests.

Go to <a href="https://mlm.pearson.com/northamerica/mymathlab/students/get-registered/index.html">https://mlm.pearson.com/northamerica/mymathlab/students/get-registered/index.html</a>
Use your MLM access code that you just bought from the bookstore and the Course ID frost67769. If you are a continuing student, please note this is a different Course ID from last term, but your subscription to MLM is good for 2 years. You must notify me if you want your MLM grades from a previous term within the last year to be transferred. For new students, you can get 14 days of free temporary access.

# d) Other

Calculator: The Sharp EL-531 scientific calculator is recommended, however in this online course any non-programmable calculator will be acceptable.

# COURSE SCHEDULE, TOPICS, AND ASSOCIATED PREPARATION / ACTIVITY / EVALUATION

The following schedule and course components are subject to change with reasonable advance notice, as deemed appropriate by the instructor.

# Classes are held online in D2L Collaborate. Homework, Quizzes and Tests are done in MyMathLab (MLM).

Time	Monday	Tuesday	Wed	Thursday	Friday
4:30-5:30pm		Office Hours		Office Hours	
		Math 072/073-DS02		Math 072/073-DS02	
5:30-7:50pm		Collaborate		Collaborate	
5:30-7:50pm		5:30-6:30 for 072 primarily		5:30-6:30 for 072 primarily	
		6:30-7:30 for 073 primarily		6:30-7:30 for 073 primarily	
4:30-8:00pm Test writing period			Test writing period		

If you cannot write a test on Tues or Thur evenings alternate arrangements may be made, but if you run into difficulites, help may not be available.

Since this is a self-paced course, there will not be a formal lecture. However, I encourage you to check in regularly at the start of class in D2L Collaborate. Class time may include a mini-lecture on a popular topic or individual questions. I can usually accommodate everyone's questions during class time, but you may be asked to wait, return in a short time, or limit your questions.

It may be helpful to set aside the 4 hours of class time and an additional 4 hours for studying. To complete the course in one term, you will need to dedicate at least 8-12 hr/week.

The suggested pacing schedule below will assist you in completing the course in one term, however, you may want to go at a faster pace to complete it earlier, or you may need more time and will need 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.

# Suggested Pacing Schedule to complete the course in one term:

This pacing schedule is provided if you want to complete Math 073 in one term. You may want to complete it faster, or if you need more time you can re-register for another term. Test marks may be carried forward for up to one year. You can take up to 3 terms to complete a course. If you wrote the Math 072 Chap 4 test within the last year, you can transfer that score for your first test in Math 073.

Wk	Starting week of	Monday	Tuesday	Wednesday	Thursday	Friday
1	Jan 10		4.1 Introduction to Polynomials 4.2 Multiplication of Polynomials 6:30 Collaborate	4.3 Introduction to Factoring	4.4 Factoring Trinomials: $x^2 + bx + c$ 6:30 Collaborate	4.5 Factoring Trinomials: $ax^2 + bx + c$
2	Jan 17	4.6 Special Factoring	4.6 Special Factoring 6:30 Collaborate	4.7 Factoring: A General Strategy	4.8 Applications of Polynomial Equations Book Test 6:30 Collaborate	Chapter 4 Practice Test
3	Jan 24	Chapter 4 Review	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
4	Jan 31	5.4 Complex Rational Expressions	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	Feb 7	5.8 Variation and Applications	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	Feb 14	6.2 Rational Numbers as Exponents	6.3 Simplifying Radical Expressions 6:30 Collaborate	6.4 Addition, Subtraction, and More Multiplication	6.5 More on Division of Radical Expressions 6:30 Collaborate	6.6 Solving Radical Equations
7	Feb 21	Family Day	Reading Break			
8	Feb 28	6.6 Solving Radical Equations	6.7 Applications Involving Powers and Roots 6:30 Collaborate	6.8 The Complex Numbers	Chapter 6 Practice Test Book Test 6:30 Collaborate	Chapter 6 Review
9	Mar 7	Chapter 6 Review	Chapter 6 Test 6:30 Collaborate	7.1 Basics of Solving Quadratic Equations	7.1 Basics of Solving Quadratic Equations	7.2 The Quadratic Formula
10	Mar 14	7.3 Applications Involving Quadratic Equations	7.4 More on Quadratic Equations 6:30 Collaborate	7.5 Graphing $f(x)$ $= a(x - h)^2 + k$	7.6 Graphing $f(x) = ax^2 + bx + c$ 6:30 Collaborate	7.6 Graphing $f(x) = ax^2 + bx + c$
11	Mar 21	7.7a Modeling with Quadratic Functions and Max/Min Problems	Chapter 7 Practice Test Book Test 6:30 Collaborate	Chapter 7 Review	Chapter 7 Test 6:30 Collaborate	*Trig 1 (Part 1) Trig Functions of Acute Angles
12	Mar 28	*Trig 1 (Part 2) Trig Functions of Acute Angles	*Trig 2 Applications of Right Triangles 6:30 Collaborate	*Trig 3 Trig Functions of Any Angles	*Trig 3 Trig Functions of Any Angles 6:30 Collaborate	*Trig 4 The Law of Sines
13	Apr 4	*Trig 5 The Law of Cosines	Trig Practice Test Book Test 6:30 Collaborate	Trig Review	Trig Test 6:30 Collaborate	Exam Review
14	Apr 11	Exam Review	Exam Review Book Exam 6:30 Collaborate	Exam Review	Exam Review 6:30 Collaborate	Holiday
	Apr 18	Holiday	Final Exam		Apr 21: Last Day to Write Tests/Exam	Exam Review

<sup>\*</sup>For the Trig section, we use a different online textbook which is provided on the D2L website: under Math 073 -> Trigonometry. Assignments and the test are still written in MLM.

• Tests can be written on Tues. or Thur. evenings from 4:30-8:00pm and must be booked at least two business days ahead. The last day to write tests/exam is Apr 21.

# How do I Work Through the Course?

- 1. Go to MLM -> Chapter Contents-> choose the section-> read the etext and watch the section video.
- 2. Do the HW Assignments in MLM for that section.
- 3. If you have questions, attend the online class by going to <a href="http://online.camosun.ca">http://online.camosun.ca</a>, select Math 073, open Collaborate on the top menu bar, and choose the day's session.
- 4. After completing all the HW Assignments for the unit, do the practice test in MLM.
- 5. Email Cathy to book your test. Please allow at least two business days.
- 6. Do the test in *MLM*. Show your work on your own paper and submit it in the D2L Assignment Tool as a single pdf.
- 7. When you have written all 5 tests and have reviewed the entire course, do the exam review. Then contact your instructor to make arrangements to write the final exam.

### How to Get Help:

- a) During class in D2L Collaborate.
- b) During a test or quiz: Email me and I'll get back to you as quickly as possible.
- c) Outside of class hours: Email me. I will usually get back to you within 1 business day.
- d) Free tutoring with Camosun tutors:

See the <u>Camosun Math lab webpage</u> for times and locations or email <u>mathlab@camosun.ca</u> or book a video chat at

https://outlook.office365.com/owa/calendar/MathLab@camosun.ca/bookings/

e) Technical Support for MyMathLab: http://www.mymathlab.com/student-support

Students registered with the Centre for Accessible Learning (CAL) who complete quizzes, tests, and exams with academic accommodations have booking procedures and deadlines with CAL where advanced noticed is required. Deadlines scan be reviewed on the <u>CAL exams page</u>. <a href="http://camosun.ca/services/accessible-learning/exams.html">http://camosun.ca/services/accessible-learning/exams.html</a>

#### **EVALUATION OF LEARNING**

DESCRIPTION	WEIGHTING
Homework Assignments	20%
Practice Tests	10%
Tests	35%
Final Exam	35%
TOTAL	100%

If you have a concern about a grade you have received for an evaluation, please come and see me as soon as possible. Refer to the <u>Grade Review and Appeals</u> policy for more information. http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf

#### **COURSE GUIDELINES & EXPECTATIONS**

Classes and office hours are held online in D2L Collaborate. Homework, Quizzes, Tests and the Final exam are done in MyMathLab (MLM).

- a) Weekly Homework Assignments (20%): You have three attempts to complete a question.
- b) Practice Tests (10%): Two attempts. You must get at least 75% to qualify to write the test.
- c) Tests (35%): There are 5 tests. Two attempts. You must submit work.

After completing all the homework and the practice test, you can book your test by sending me an email noting the day (Tues or Thur) and time (between 4:30-8:00pm) when you can write it. If your practice test and homework is satisfactory, the test will be loaded onto MLM. Please allow 2 business days.

Enter your answers in MML, but show all your work on paper, clearly numbering each question. Save your work as a <u>single pdf file</u> and within half an hour of writing the test, submit it in the D2L Assignment Tool. You will not receive credit for the test unless satisfactory work is shown.

You may have a scanning app on your phone, or you can take a picture but you must save it as a single pdf file. Free Scanning App: https://acrobat.adobe.com/ca/en/mobile/scanner-app.html

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

**d)** Final Exam (35%): The comprehensive final exam is on MLM and is based on the entire course. One attempt. Work must be submitted.

If you would prefer to write the tests or the final exam in person and on campus, arrangements can be made providing it is safe to do so.

For all tests and the final exam, you are not allowed help from any other person, website, electronic, written or other source other than those authorized by the instructor.

#### STUDENT RESPONSIBILITY

Enrolment at Camosun assumes that the student will become a responsible member of the College community. As such, each student will display a positive work ethic, assist in the preservation of College property, and assume responsibility for their education by researching academic requirements and policies; demonstrating courtesy and respect toward others; and respecting expectations concerning attendance, assignments, deadlines, and appointments.

#### SUPPORTS AND SERVICES FOR STUDENTS

Camosun College offers a number of services to help you succeed in and out of the classroom. For a detailed overview of the supports and services visit http://camosun.ca/students/.

Academic Advising	http://camosun.ca/advising		
Accessible Learning	http://camosun.ca/accessible-learning		
Counselling	http://camosun.ca/counselling		
Career Services	http://camosun.ca/coop		
Financial Aid and Awards	http://camosun.ca/financialaid		
Help Centres (Math/English/Science)	http://camosun.ca/help-centres		
Indigenous Student Support	http://camosun.ca/indigenous		
International Student Support	http://camosun.ca/international/		
Learning Skills	http://camosun.ca/learningskills		
Library	http://camosun.ca/services/library/		
Office of Student Support	http://camosun.ca/oss		
Ombudsperson	http://camosun.ca/ombuds		
Registration	http://camosun.ca/registration		
Technology Support	http://camosun.ca/its		
Writing Centre	http://camosun.ca/writing-centre		

If you have a mental health concern, please contact Counselling to arrange an appointment as soon as possible. Counselling sessions are available at both campuses during business hours. If you need urgent support after-hours, please contact the Vancouver Island Crisis Line at 1-888-494-3888 or call 911.

#### Academic Accommodations for Students with Disabilities

The College is committed to providing appropriate and reasonable academic accommodations to students with disabilities (i.e. physical, depression, learning, etc). If you have a disability, the <u>Centre for Accessible Learning</u> (CAL) can help you document your needs, and where disability-related barriers to access in your courses exist, create an accommodation plan. By making a plan through CAL, you can ensure you have the appropriate academic accommodations you need without disclosing your diagnosis or condition to course instructors. Please visit the CAL website for contacts and to learn how to get started:

http://camosun.ca/services/accessible-learning/

# Academic Integrity

Please visit <a href="http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.13.pdf">http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.13.pdf</a> for policy regarding academic expectations and details for addressing and resolving matters of academic misconduct.

# **Academic Progress**

Please visit <a href="http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.1.pdf">http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.1.pdf</a> for further details on how Camosun College monitors students' academic progress and what steps can be taken if a student is at risk of not meeting the College's academic progress standards.

## Course Withdrawals Policy

Please visit <a href="http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.2.pdf">http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.2.pdf</a> for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit <a href="http://camosun.ca/learn/fees/#deadlines">http://camosun.ca/learn/fees/#deadlines</a>.

#### **Grading Policy**

Please visit <a href="http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf">http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf</a> for further details about grading.

#### Grade Review and Appeals

Please visit <a href="http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf">http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf</a> for policy relating to requests for review and appeal of grades.

#### Mandatory Attendance for First Class Meeting of Each Course

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable reason in advance, you will be removed from the course and the space offered to the next waitlisted student. For more information, please see the "Attendance" section under "Registration Policies and Procedures"

(http://camosun.ca/learn/calendar/current/procedures.html) and the Grading Policy at http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf.

# Medical / Compassionate Withdrawals

Students who are incapacitated and unable to complete or succeed in their studies by virtue of serious and demonstrated exceptional circumstances may be eligible for a medical/compassionate withdrawal. Please visit

http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.8.pdf to learn more about the process involved in a medical/compassionate withdrawal.

#### Sexual Violence and Misconduct

Camosun is committed to creating a campus culture of safety, respect, and consent. Camosun's Office of Student Support is responsible for offering support to students impacted by sexual violence. Regardless of when or where the sexual violence or misconduct occurred, students can access support at Camosun. The Office of Student Support will make sure students have a safe and private place to talk and will help them understand what supports are available and their options for next steps. The Office of Student Support respects a student's right to choose what is right for them. For more information see Camosun's Sexualized Violence and Misconduct Policy: http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.9.pdf and camosun.ca/sexual-violence. To contact the Office of Student Support:

oss@camosun.ca or by phone: 250-370-3046 or 250-3703841

# Student Misconduct (Non-Academic)

Camosun College is committed to building the academic competency of all students, seeks to empower students to become agents of their own learning, and promotes academic belonging for everyone. Camosun also expects that all students to conduct themselves in a manner that contributes to a positive, supportive, and safe learning environment. Please review Camosun College's Student Misconduct Policy at <a href="http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf">http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf</a> to understand the College's expectations of academic integrity and student behavioural conduct.

Changes to this syllabus: Every effort has been made to ensure that information in this syllabus is accurate at the time of publication. The College reserves the right to change courses if it becomes necessary so that course content remains relevant. In such cases, the instructor will give the students clear and timely notice of the changes.