COURSE SYLLABUS

CAMOSUN COLLEGE

COURSE TITLE: Math 073

CLASS SECTION: DS01

TERM: 2021S

COURSE CREDITS: 4

DELIVERY METHOD(S):   Online, Self-Paced

Camosun College campuses are located on the traditional territories of the Lək̓ʷəŋən and W̱SÁNEĆ peoples. We acknowledge their welcome and graciousness to the students who seek knowledge here.
Learn more about Camosun's Territorial Acknowledgement.

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: http://camosun.ca/covid19/faq/covid-faqs-students.html. 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: Crystal Lomas

EMAIL: LomasC@camosun.bc.ca

OFFICE: Collaborate (Ewing 270)

HOURS: By appointment, please email

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.

PREREQUISITE(S):   One of: C in Pre-Calculus 11, C in Foundations of Math 12, C in MATH 077, C+ in MATH 072, C+ in MATH 075, C+ in MATH 135

CO-REQUISITE(S):   None.

EXCLUSION(S):   None.

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

1.   Use a scientific calculator to evaluate complex expressions with emphasis on using special keys to perform a variety of functions.

2.   Develop facility with polynomial expressions and equations. In particular:
     a.   divide polynomials and binomials using long division, and
     b.   divide polynomials and binomials using synthetic division.

3.   Perform mathematical operations involving rational expressions. In particular:
     a.   identify situations and find values for which a rational expression will be undefined,
     b.   simplify rational expressions,
     c.   add, subtract, multiply and divide rational expressions,
     d.   solve rational equations and check the solutions,
     e.   solve formulas involving rational expressions for a given variable,
     f.   solve applied problems that can be modelled with rational equations,
     g.   simplify complex fractions,
     h.   express variations in the form of equations (direct, inverse, joint, combined), and
     i.   solve problems involving direct, inverse, joint and combined variation.

4.   Perform mathematical operations involving radicals and rational exponents. In particular:
     a.   identify situations and find values for which a radical expression will be undefined,
     b.   write radicals as powers with rational exponents and vice-versa,
     c.   use rational exponents to simplify radical expressions,
     d.   simplify, add, subtract, multiply and divide radical expressions (numeric or algebraic,)
     e.   rationalize denominators in fractional expressions containing radicals (including the use of conjugates,)
     f.   solve equations involving radical expressions or powers with rational exponents and check for extraneous roots,
     g.   solve formulas involving powers and square roots for a given variable,
     h.   solve applied problems which can be modelled by radical equations, and determine if solutions are reasonable given the context of the problem,
     i.   identify imaginary and complex numbers and express them in standard form, and
     j.   add, subtract, multiply, and divide complex numbers.

5.   Develop facility with solving problems involving quadratic functions. In particular:
     a.   solve quadratic equations by factoring, using the principle of square roots, completing the square, and employing the quadratic formula,
     b.   use the discriminant to identify the number and type of solutions of a quadratic equation,
     c.   write a quadratic equation given its solutions,
     d.   solve rational and radical equations reducible to a quadratic pattern and check that answers are reasonable,
     e.   solve selected polynomial equations that can be factored simplifying to linear and/or quadratic factors,
     f.   graph quadratic functions of the form $f(x)=a(x-h)^2+k$ and demonstrate translations, reflections, and stretching/shrinking resulting from changes in the function equation,
     g.   find the vertex, line of symmetry, minimum or maximum values, x- and y-intercepts, domain and range, given the function $f(x)=a(x-h)^2+k$,
     h.   rewrite $f(x)=ax^2+bx+c$ as $f(x)=a(x-h)^2+k$ by completing the square,
     i.   solve problems that can be modelled using quadratic equations such as maximum and minimum problems,

j. solve quadratic equations having complex number solutions.

6. Understand the basics of triangle trigonometry. In particular:
   a. label the sides of a right triangle with respect to a given angle,
   b. determine sine, cosine, and tangent ratios of an angle in a right triangle using the side lengths,
   c. use a scientific calculator to find the trigonometric value for a given angle and find an angle given its trigonometric value,
   d. solve right triangles and applied problems using the basic trigonometric ratios, the Pythagorean Theorem, and the sum of the angles of a triangle (180^0),
   e. use the Law of Sines and the Law of Cosines to solve non-right (oblique) triangles and applied problems,
   f. determine the quadrant for positive and negative angles in standard position,
   g. identify coterminal angles,
   h. identify reference angles,
   i. determine all trigonometric function values for angles in standard position,
   j. solve trigonometric equations involving the primary functions over a specific domain,
   k. find exact values of the trigonometric ratios for special angles, and
   l. find exact values of the trigonometric functions for angles with special reference angles.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

Textbook:	Intermediate Algebra 13th edition by M.L. Bittinger, with digital access code for MyLab Math (available through the college bookstore). If you do not want a print text, then you can purchase the standalone digital code since it grants access to the digital textbook and student solutions manual. Our CourseID is **lomas28161**.
	Note: There is a supplementary textbook for the Trig section and it is posted on D2L.
Tech:	Computer/tablet, headphones or speakers, internet access. Microphone recommended.
Calculator:	Sharp EL-531 scientific calculator or use the online calculator at https://www.calculator.net/scientific-calculator.html

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

Instructor support via Collaborate (access through D2L): Tues & Thurs 5:30 – 7:50 pm

The following schedule is suggested to complete Math 073 in one term. You may 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 have recently completed Math 072 and feel comfortable with the material in Chapter 4, contact your instructor to use your Chapter 4 test grade for this course.

WEEK or DATE RANGE	ACTIVITY or TOPIC	OTHER NOTES
May 3-7	How to Enter Answers, Sections 4.1, 4.2, 4.3, 4.4, 4.5	
May 10-14	Sections 4.6, 4.7, 4.8, Chapter 4 Practice Test	Book Chapter 4 Test at least two business days in advance.
May 17-21	Sections 5.1, 5.2, 5.3, 5.4	

WEEK or DATE RANGE	ACTIVITY or TOPIC	OTHER NOTES
May 24-28	Sections 5.5, 5.6c, 5.7, 5.8,	
May 31-June 4	Chapter 5 Practice Test, Sections 6.1, 6.2	Book Chapter 5 test at least two business days in advance.
June 7-10	Sections 6.3, 6.4, 6.5	
June 14-18	Sections 6.6, 6.7, 6.8	
June 21-25	Chapter 6 Practice Test, Section 7.1	Book Chapter 6 test at least two business days in advance.
June 28-July 1	Sections 7.2, 7.3, 7.4, 7.5	
July 5-9	Sections 7.5, 7.6, 7.7a	
July 12-16	Chapter 7 Practice Test, Trig 6.1* part 1 & part 2	Book Chapter 7 test at least two business days in advance.
July 19-23	Trig 6.2*, 6.3*, 8.1*, 8.2*	
July 26-30	Trig Practice Test, Exam Review	Book Trig Test at least two business days in advance.
Aug 3-6	Exam Review	
Aug 8-12	Final Exam	Book Final Exam at least two business days in advance.
Aug 12	**Last day** to write tests/exam	

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 CAL exams page. http://camosun.ca/services/accessible-learning/exams.html

EVALUATION OF LEARNING

DESCRIPTION		WEIGHTING
Homework Assignments		20%
Practice Tests		10%
Chapter Tests		40%
Final Exam		30%
	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 Grade Review and Appeals policy for more information. http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf

COURSE GUIDELINES & EXPECATIONS

All course items are completed through MyLab Math (MLM).

Homework Assignments
There is an assignment for each chapter. You get three attempts on each question.

Practice Tests
Before each test, you will need to complete the practice test. You get 2 attempts.

Chapter Tests
After completing all the homework and the practice test, you can book your chapter test by sending me an email noting the day (Tuesday or Thursday) and time (between 4:00-8:00pm) when you can write it. If I feel that your work is satisfactory, 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 MLM. Submit your work within half an hour of writing the test by scanning it as a single pdf file, then using the Assignment tool in D2L. You will not receive credit for the test unless satisfactory work is shown. E-mail me during your test if you have a question and I will respond promptly.

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.

No formulas, textbooks, or other resources are allowed for any chapter test.

Final Exam
There is a cumulative final exam. It covers all of the material from Chapter 4 to the end of Trigonometry. When you have completed all the tests and the exam review, and feel that you're ready, please let me know what day (Tuesday or Thursday) 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. E-mail me during your exam if you have a question and I will respond promptly.

No formulas, textbooks, or other resources are allowed for the final exam.

Class Time
During class times (Tues & Thurs, 5:30-7:50), I will be available for questions via Collaborate (you can access Collaborate through D2L). I encourage you to attend classes to keep on track and so you can easily ask questions when you get stuck.

Please do not join Crystal's Office if there is already a student visiting; raise your hand and I will come get you.

SCHOOL OR DEPARTMENTAL INFORMATION

Free tutoring: You can email mathlab@camosun.ca or book a video chat at
https://outlook.office365.com/owa/calendar/MathLab@camosun.ca/bookings/

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/.

Support Service	Website
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.

COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

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 Centre for Accessible Learning (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 http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.13.pdf for policy regarding academic expectations and details for addressing and resolving matters of academic misconduct.

Academic Progress

Please visit http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.1.pdf 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 http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.2.pdf for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit http://camosun.ca/learn/fees/#deadlines.

Grading Policy

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

Grade Review and Appeals

Please visit http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf 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 http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf 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.