COURSE SYLLABUS

COURSE TITLE: Math 057 Intermediate Math for Electrical Trades

CLASS SECTION: S08 TERM: Winter 2025

COURSE CREDITS: 0 DELIVERY METHOD: In Person

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.

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: Tim Barss EMAIL: barsst@camosun.ca

LOCATION: Victoria Native Friendship Centre (VNFC) Camosun classroom

CLASS HOURS: Monday & Wednesday 1:00 – 4:00

OFFICE Hours: Monday & Wednesday 12:00 – 1:00 in person at VNFC

Tuesday 1:00-2:00 & Friday 9:00-10:00 online

Or by appointment

OTHER STUDENT SUPPORTS:

Lansdowne Campus: Room Ewing 342 Math Help Centre open Mon/Wed 3:30-8:00 and Tues/Thurs 3:45-8:00

Interurban Campus: Room CBA 109 Help Centre open Mon-Thurs 9:00-4:00 and Fri 9:00-12:00

This course consists of 6 hours of class time and 4 hours of lab time per week. Lab time includes, but is not limited to, tutorials with an instructor and/or instructional assistants and using the instructional resources in the Help Centre and library, virtually, and in person.

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 course covers the second part of ABE Intermediate Mathematics, and provides the introductory algebra and problem-solving skills required for further study in advanced-level algebra, math for technology, and any course or program that requires Math 10. Topics: real numbers, algebraic expressions, equations, inequalities, graphing, and polynomials.

Prerequisite

- C in MATH 052

COURSE LEARNING OUTCOMES / OBJECTIVES

Upon successful completion of this course, students will be able to:

1. Operations with Rational Numbers
    a. Write fractions as decimals and decimals as fractions
    b. Add, subtract, multiply, divide, and simplify rational numbers
    c. Use order of operations
    d. Graph rational numbers on the number line
    e. Define absolute value
2. Algebra
    a. Explain the use of variables
    b. Evaluate algebraic expressions using substitution
    c. Combine like terms and remove parentheses
    d. Solve first degree equations in one variable
    e. Translate a problem into an equation
    f. Use equations to solve problems
    g. Solve simple formulas for a given variable
    h. Use formulas to solve problems
3. Linear Equations and Graphing
    a. Draw a Cartesian co-ordinate system
    b. Plot and name points in a Cartesian co-ordinate system
    c. Given an equation in two variables:
        i. Determine if an ordered pair is a solution
        ii. Find ordered pairs which are solutions
    d. Graph equations of the form x = a and y = b
    e. Define slope and relate to grade and pitch
    f. Graph linear equations using
        i. Slope and y-intercept
        ii. Two intercepts
        iii. A table of values
    g. Find x and y intercepts
    h. Determine the equation of a line, y = mx + b, given:
        i. Its graph
        ii. Its slope and a point on the line
        iii. Two points on the line
    i. Solve problems using graphs of linear equations
4. Powers, Roots, and Scientific Notation
    a. Read and write numbers expressed as powers
    b. Evaluate powers with integral exponents
    c. Apply laws of exponents to simplify expressions
    d. Express numbers using scientific notation
    e. Convert between scientific notation and standard notation

f. Determine the square root of a perfect square
g. Express a square root as a mixed radical in simplest form (numerical radicands only)
h. Approximate square roots of real numbers using a calculator

5. Polynomials
   a. Distinguish between monomials, binomials, trinomials, and other polynomials in one variable
   b. Apply the laws of exponents to variable expressions with integral exponents
   c. Evaluate polynomials by substitution
   d. Add, subtract, and multiply polynomials in one variable
   e. Factor polynomials by removing the largest common factor
   f. Factor binomials of the form $ax^2 - bx^2$
   g. Factor trinomials of the form $ax^2 + bx + c$ with a = 1 ONLY
   h. Divide a polynomial

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

(a) Textbooks: The textbooks may be purchased from the bookstore. A digital version can be freely accessed as below:
Basic Review: https://pressbooks.bccampus/basicreview/
Intermediate Algebra I: https://pressbooks.bccampus/math53/

(b) Scientific calculator EL-531W (or similar) will be the only calculator allowed for this course

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

MATH 053 course content		
	BASIC REVIEW UNIT (Chapters 1 & 2)	
Week 1-2	**Chapter 1: Whole Numbers, Integers, and Introduction to Algebra**	
	1.1 Whole Numbers	
	1.2 Use the Language of Algebra	
	1.3 Evaluate, Simplify, and Translate Expressions	
	1.4 Add and Subtract Integers	
	1.5 Multiply and Divide Integers	
	1.6 Chapter Review	
Week 3-4	**Chapter 2: Operations with Rational Numbers and Intro to Real Numbers**	
	2.1 Visualize Fractions	
	2.2 Add and Subtract Fractions	
	2.3 Decimals	
	2.4 Introduction to the Real Numbers	
	2.5 Properties of Real Numbers	
	2.6 Chapter Review	
	BASIC REVIEW UNIT FINAL TEST (no calculator)	
Week 5-7	UNIT 1 | Chapter 3: Solving First Degree Equations in One Variable	

	3.1 Solve Equations Using the Subtraction and Addition Properties of Equality	
	3.2 Solve Equations Using the Division and Multiplication Properties of Equality	
	3.3 Solve Equations with Variables and Constants on Both Sides	
	3.4 Solve Equations with Fraction or Decimal Coefficients	
	3.5 Use a General Strategy to Solve Linear Equations	
	3.6 Solve a Formula for a Specific Variable	
	3.7 Use a Problem-Solving Strategy	
	3.8 Chapter Review	
	UNIT 1 FINAL TEST	
Week 8-9	UNIT 2 | Chapter 4: Linear Equations and Graphing	
	4.1 Use the Rectangular Coordinate System	
	4.2 Graph Linear Equations in Two Variables	
	4.3 Graph with Intercepts	
	4.4 Understand Slope of a Line	
	4.5 Use the Slope-Intercept Form of an Equation of a Line	
	4.6 Find the Equation of a Line	
	4.7 Chapter Review	
	UNIT 2 FINAL TEST	
Week 10-12	UNIT 3 | Chapter 5: Powers, Roots, and Scientific Notation	
	5.1 Use Multiplication Properties of Exponents	
	5.2 Use Quotient Properties of Exponents	
	5.3 Integer Exponents and Scientific Notation	
	5.4 Simplify and Use Square Roots	
	5.5 Simplify Square Roots	
	5.6 Chapter Review	
	UNIT 3 FINAL TEST	
	UNIT 4 | Chapter 6: Polynomials	
	6.1 Add and Subtract Polynomials	
	6.2 Multiply Polynomials	
	6.3 Special Products	
	6.4 Greatest Common Factor and Factor by Grouping	
	6.5 Factor Quadratic Trinomials with Leading Coefficient 1	
	6.6 Divide Polynomials	
	6.7 Chapter Review	
	UNIT 4 TEST	
	UNIT 5 | Trigonometry (supplementary module)	
	5.1 The right triangle	
	5.2 Angles and sides	
	5.3 The Pythagorean Theorem	
	5.4 The tangent ratio	
	5.5 Using the tangent ratio	
	5.6 The sine and cosine ratios	
	5.7 Solving triangles	
	Practice Test	
	UNIT 5 TEST	
	UNIT 6 | Vectors	

	Problem Sets	
	Vectors Final Test	
	MATH 053 FINAL PRACTICE	
	MATH 053 FINAL 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 notice is required. Deadlines scan be reviewed on the CAL exams page. http://camosun.ca/services/accessible-learning/exams.html

EVALUATION OF LEARNING

A minimum of 75% is needed on each test.

Basic Review Test (may not be required if done in 052, in which case other weights will be adjusted)	15%
Unit 1 Test	15%
Unit 2 Test	15%
Unit 3 Test	15%
Unit 4 Test	15%
Final Exam	25%

COURSE GUIDELINES & EXPECATIONS

The course consists of 6 hours of class time and 4 hours of lab time per week. Lab time is generally spent in the Help Centre where instructional resources are available. Course completion time will vary for each student, depending on a number of factors, including your current level of math skills, motivation, learning rate, and how much time you have to study math, either at the college or at home. Students generally need to spend 5–15 hours of study time per week to complete each math course within a reasonable amount of time.

SCHOOL OR DEPARTMENTAL INFORMATION

Grading System – Standard Grading System http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf

A+	90–100%	B+	77–79%	C+	65–69%	D	50-59%
A	85–89%	B	73–76%	C	60–64%	F	40-49%
A–	80–84%	B–	70–72%	IP	in progress		

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://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf

for information on conversion to final grades, and for additional information on student record and transcript notations.

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.