

COURSE SYLLABUS



COURSE TITLE: **MATH-077 College Prep - Mathematics 1 (4 Credits)**

CLASS SECTION: 001

TERM: 2023F

COURSE CREDITS: 4

DELIVERY METHOD(S): Lectures

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](#).

For COVID-19 information please visit <https://legacy.camosun.ca/covid19/index.html>.

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: Bogdan Verjinschi

EMAIL: verjinschi@camosun.bc.ca

OFFICE: E244

HOURS: 9:30-11:20 a.m.

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

Students will develop the foundation in algebra and trigonometry that will enable further study of mathematics or satisfy program and entrance requirements for Precalculus 11. Topics include linear equations and inequalities; function notation; linear functions; systems of linear equations in two variables; polynomial, rational, and ; quadratic functions and equations; and triangle trigonometry including the Sine and Cosine Laws.

PREREQUISITE(S):

One of: C in Foundations of Math & Pre-calculus 10 C- in Pre-calculus 11 C in MATH 053 C in MATH 075 - Must be completed prior to taking this course.

COURSE LEARNING OUTCOMES / OBJECTIVES

This course provides a foundation for the further study of mathematics. Topics include linear equations and inequalities; function notation; linear functions; systems of linear equations in two variables; polynomial, rational and radical expressions, and equations; quadratic functions and equations; and triangle trigonometry including the Sine and Cosine Laws. [5 Credits] Source: Camosun College Calendar <http://camosun.ca/learn/calendar/current/web/math.html>

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

A) Intermediate Algebra and Trigonometry Camosun College Edition

B)

a) Computer/Tablet/Phone and Internet Access

b) **CALCULATOR:** Sharp EL531 W (or EL-510R) scientific calculator or <https://www.calculator.net/scientific-calculator.html>

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.

Table of Contents

1/Chapter R: Review of Operations on the Set of Real Numbers

- R1. Structure of the Set of Real Numbers 1
- R2. Number Line and Interval Notation 8
- R3. Properties and Order of Operations on Real Numbers 15

2/Chapter L: Linear Equations

- L1. Linear Equations in One Variable 32
- L2. Formulas and Applications 41
- L3. Applications of Linear Equations 52
- L4. Linear Inequalities and Interval Notation 67
- L5. Operations on Sets and Compound Inequalities 78
- L6. Absolute Value Equations 87

3/Chapter G: Graphs and Linear Functions

- G1. System of Coordinates, Graphs of Linear Equations, ~~and the Midpoint Formula~~ 95
- G2. Slope of a Line and Its Interpretation 105
- G3. Forms of Linear Equations in Two Variables 113
- G4. Linear Inequalities in Two Variables 125
- G5. Concept of Function, Domain, and Range 129
- G6. Function Notation and Evaluating Functions 135

4/Chapter E: Systems of Linear Equations

- E1. Systems of Linear Equations in Two Variables 146
- E2. Applications of Systems of Linear Equations in Two Variables 158

5/Chapter P: Polynomials and Polynomial Functions

- P1. Addition and Subtraction of Polynomials 169
- P2. Multiplication of Polynomials 178
- P3. Division of Polynomials 187
- P4. Graphs of Basic Polynomial Functions 193

6/Chapter F: Factoring

- F1. Greatest Common Factor and Factoring by Grouping 197
- F2. Factoring Trinomials 206
- F3. Special Factoring and a General Strategy of Factoring 215
- F4. Solving Polynomial Equations and Applications of Factoring 224

7/Chapter RT: Rational Expressions and Functions

- RT1. Integral Exponents and Scientific Notation 233
- RT2. Rational Expressions and Functions; Multiplication and Division of Rational Expressions 241
- RT3. Addition and Subtraction of Rational Expressions 249
- RT4. Complex Fractions 256
- RT5. Rational Equations and Graphs 261
- RT6. Applications and Rational Equations 272

8/Chapter RD: Radicals and Radical Functions

- RD1. Radical Expressions, Functions, and Graphs 288
- RD2. Radical Exponents 299
- RD3. Simplifying Radical Expressions ~~and the Distance Formula~~ 305
- RD4. Operations on Radical Expressions; Rationalization of Denominators 313
- RD5. Radical Equations 323
- RD6. Complex Numbers 333

9/Chapter Q: Quadratic Equations and Functions

- Q1. Methods of Solving Quadratic Equations 341
- Q2. Applications of Quadratic Equations 354
- Q3. Properties and Graphs of Quadratic Functions 365
- Q4. Properties of Quadratic Function and Optimization Problems 376

10/Chapter T: Trigonometry

- T1. Angles and Degree Measure 387
- T2. Trigonometric Ratios of an Acute Angle and of Any Angle 392
- T3. Evaluation of Trigonometric Functions 399
- T4. Applications of Right-Angle Trigonometry 408
- T5. The Law of Sines and Cosines and Their Applications 418

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 can be reviewed on the [CAL exams page](http://camosun.ca/services/accessible-learning/exams.html). <http://camosun.ca/services/accessible-learning/exams.html>

Week	Class Dates	Monday	Tuesday	Wednesday	Thursday
1.	Sept 4-8	Labour Day College closed	R1, R2	R3	L1
2	Sept 11-15	L2	L3	L4 L5	L6 Abs.Eq.
3	Sept 18-22	TEST1 SEPT 18 R1 to L6?	G1	G2	G3
4	Sept 25-29	G4	G5	G6	E1
5	Oct 2-6	College closed	TEST2= OCT 3 G1 to G6	E1	E2
6...	Oct 9-13	Thanksgiving Day College closed	P1 P2	P2 P3	P3 P4
7	Oct 16-20	TEST3 =OCT 16 E1 to P4	F1 Grouping F2 Trinomials	F3SpecialFactoring	F4 Applications
8	Oct 23-27	RT1 RT2	RT3addFractions	RT4ComplexFractio ns	RT5
9	Oct30-Nov 3	TEST4=OCT30 F1-RT5	RT6	RD1	RD2,3
10	Nov 6-10	RD4	RD5	RD6	R
11	Nov 13-17	Remembrance Day College closed	TEST5=NOV 14 RT6-RD6	Q1	Q2
12	Nov 20-24	Q3	Q4	Trig1,2	Trig3
13.	Nov 27-31	TEST 6 = NOV27 Q1-T3	Trig4	Trig5	Trig5
14	Dec 4-8	R	R	R	R

EVALUATION OF LEARNING

DESCRIPTION	NOTES	WEIGHTING
6 Tests	see course schedule for exact dates	60%
Final Exam (3 hours)	Exam period Dec 11 - 19 See MyCamosun for exact date	40%
	TOTAL	100%

ALL TESTS COUNT

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.

COURSE GUIDELINES & EXPECTATIONS

To get the most out of this course, students are expected to **attend all classes and be on time**. It is your responsibility to acquire all information given during a class missed, including notes, hand-outs, changed exam dates etc.

Due Dates and Late Assignments

The due dates are established in accordance with the course and term duration. The purpose of the due dates is to help both you and I to get the assignments done so that they can be assessed in a timely manner. Just as you need time to complete the assignments, I need enough time to grade them.

As such, the **due dates are fixed, and it is expected that students will hand in assignments on time.**

All assignments must be handed in by the time indicated (on the assignment, or on D2L). Late assignments may be graded but marks equivalent to 10% of the total value of the assignment will be deducted for each day, inclusive of days on the weekend, past the deadline. **If solutions for the assignments have already been posted, a late assignment will not be accepted.** Assignments will not be accepted that are late more than three days, inclusive of days over the weekend.

Exam Procedures

All exams must be written at the scheduled times with the exception of students requiring an accommodation by CAL. It is understood that emergency circumstances do occur (e.g. severe illness or family emergency); for such circumstances accommodation may be offered at the discretion of the instructor, provided the student:

- a) notifies the instructor in advance of the exam (not after), and
- b) provides documented evidence of the circumstance (e.g. medical certificate).

If an exam is missed with an excused absence, it is up to the instructor's discretion as to how the mark will be made up.

Be sure not to make travel plans for the end of semester until the final exam schedules are finalized and posted. Please ask any family members who might make travel plans on your behalf to consult you before booking tickets.

Please note: *the use of cell phones during a test or exam is not allowed and may result in a zero for that assessment.*

Study Habits

Good and regular study habits are essential to do well in this course. You should plan on a weekly minimum of **8 hours outside of scheduled class time** for the completion of readings, assignments and for general studying. Joining a study group can help make this more achievable.

You will need to write down additional key words for examples and explanations given during lecture and review text **and videos to support** your understanding. It is also recommended practice to transform lecture notes into a study-friendly format after each lecture, incorporating additional information from your textbook. Study these notes before the next class to prepare yourself for new material, which will often build on previously covered material.

Please take advantage of office hours if you need extra clarification and help.

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>

Support Service	Website
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](http://camosun.ca/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.