

# COURSE SYLLABUS



COURSE TITLE: Math 075 (College Preparatory Applications of Mathematics)

CLASS SECTION: S17

TERM: Fall 2024

COURSE CREDITS: 3

DELIVERY METHOD: Blended

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](#).

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*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

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NAME: Ramona Scott    CLASSROOM: Malahat    EMAIL: [scottr@camosun.ca](mailto:scottr@camosun.ca)

CLASS HOURS: Tues/Thurs 9:30-12:20

OFFICE Hours: Tuesday and Thursday 1:00-3:00 in the classroom

Or by appointment online

*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

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Students will obtain fundamental algebra and graphical skills necessary for entry into programs that accept Math 075 as a prerequisite. These programs may include certain business programs, the criminal justice program, Camosun nursing and elementary statistics courses. However, it is **critical** that students in Math 075 have had an appointment with an Academic Advisor to confirm if Math 075 will be a sufficient math prerequisite for their specific educational and career goals.

### Prerequisite

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

## COURSE LEARNING OUTCOMES / OBJECTIVES

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

### 1. Operations with Real Numbers

It is expected that learners will be able to:

- a) add, subtract, multiply and divide rational numbers
- b) evaluate powers with rational bases and integer exponents
- c) demonstrate the order of operations with rational numbers
- d) evaluate radicals and distinguish between exact answers and approximate answers
- e) write numbers in scientific notation, convert from scientific notation to standard notation, and multiply and divide numbers expressed in scientific notation
- f) use a scientific calculator

## 2. First Degree Equations and Inequalities

It is expected that learners will be able to:

- a) solve first degree equations, in one variable, including those involving parentheses
- b) solve formulas for a given variable
- c) solve first degree inequalities in one variable
- d) solve practical problems using a first degree equation

## 3. Equations and their graphs

It is expected that learners will be able to:

- a) plot points on a coordinate system
- b) use number pairs to name points on the coordinate system
- c) determine whether a given point is a solution to an equation in two variables
- d) create a table of values and recognize the graph of linear and quadratic relations

## 4. Systems of Equations

It is expected that learners will be able to solve applied problems using:

- a) solve systems of linear equations in two variables graphically and/or algebraically
- b) graph linear inequalities in two variables
- c) solve graphically systems of linear inequalities
- d) solve practical problems

## 5. Data Analysis I

It is expected that learners will be able to:

- a) determine the mean, median, mode and range from a set of data
- b) interpret and/or construct frequency tables, broken line graphs, bar graphs, and stem-plots from a set of data
- c) design a statistical experiment, collect the data, analyze and communicate the results

## 6. Data Analysis II

It is expected that learners will be able to:

- a) find quartiles and the percentile represented by a given data value
- b) calculate the standard deviation of a set of data using appropriate technology
- c) use z-scores to analyze normally distributed data

**REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION**

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(a) Scientific calculator: The Sharp EL 531W model (or similar) will be the only calculator allowed for this course

(b) Reliable access to the internet

(c) Registration with MyOpenMath. <https://www.myopenmath.com/>

If you already have an account from a prior course you can use it. If not select “Register as a new student” to set up your account. There is no charge.

(d) Course ID & Enrollment Key: Please note that you will need a “Course ID” and “Enrollment Key” to access the content on MyOpenMath. These will be available at the start of the term from your instructor. Once you use the ID to join the MyOpenMath classroom you will have access to PDF downloads of the textbook chapters and all practice questions, quizzes, reviews, and unit tests.

## HOW TO APPROACH THIS COURSE

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- Textbook downloads, quizzes, and tests are located on MyOpenMath once you have created an account and joined the class using the ID and key supplied by your instructor
- For each quiz, it is recommended you first read the associated pages in the text download and do the “Try It” questions as you go. If, after this, you feel you need extra practice there is usually a list of suggested extra practice from the textbook for you to do as needed.
- Once you feel you are ready for the quiz, open it and start answering questions.
  - You usually have two attempts on each question (other than “yes/no” type questions)
  - If you get a question wrong twice you can ask for a similar questions as many times as you need until you get it right. There is no penalty for wrong answers. Once you get the question correct move on to the next one.
  - You may skip questions you are uncertain about and come back to them later
  - You may close the quiz and return to it later as many times as required
  - While the quiz marks themselves are not part of the mark calculation, if you score 90% or more on all of the quizzes in any given unit you will receive a 5% bonus to your score on the associated Unit Test.
- Each Unit Test will become available for you once you have scored at least 75% on the associated Unit Review Quiz

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

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| MATH 075 course content |   |                  |
|-------------------------|---|------------------|
| Suggested Timeline      | Content   | Textbook Section |
| Week 1-2                | <b>Unit 1: Operations with Real Numbers (Textbook Chapter 1)</b>      |                  |
|                         | (Download of Textbook Ch 1 available on MyOpenMath at top of Unit 1)  |                  |
|                         | Quiz 1A Algebraic Expressions   | 1.1              |
|                         | Quiz 1B Integers  | 1.2              |
|                         | Quiz 1C Fractions   | 1.3              |
|                         | Quiz 1D Decimals  | 1.4              |
|                         | Quiz 1E Expanding Brackets (supplemental PDF available on MyOpenMath) |                  |

|            |   |           |
|------------|---|-----------|
|            | Quiz 1F Simplifying Expressions with Exponents                                  | 1.5       |
|            | Quiz 1G Scientific Notation   | 1.5       |
|            | Quiz 1H Roots and Radicals  | 1.6       |
|            | Quiz 1I The Real Numbers  | 1.7       |
|            | Unit 1 Review Quiz  |           |
|            | <b>Unit 1 Test</b>  |           |
|            |   |           |
| Week 3-5   | <b>Unit 2: Solving Linear Equations &amp; Inequalities (Textbook Chapter 2)</b> |           |
|            | <b>(Download of Textbook Ch 2 available on MyOpenMath at top of Unit 2)</b>     |           |
|            | Quiz 2A Verify a Given Value is a Solution                                      | 2.1       |
|            | Quiz 2B Solve Equations Using the Subtraction & Addition Properties             | 2.1       |
|            | Quiz 2C Solve Equations Using the Division & Multiplication Properties          | 2.1       |
|            | Quiz 2D Solve Equations With Variables & Constants on Both Sides                | 2.1       |
|            | Quiz 2E Use a General Strategy to Solve a Linear Equation                       | 2.2       |
|            | Quiz 2F Classifying Equations   | 2.2       |
|            | Quiz 2G Use a Problem Solving Strategy  | 2.3       |
|            | Quiz 2H Solve a Formula for a Specific Variable                                 | 2.4       |
|            | Quiz 2I Inequalities, the Number Line, and Interval Notation                    | 2.5       |
|            | Quiz 2J Solve Inequalities Using the Division & Multiplication Properties       | 2.5       |
|            | Quiz 2K Solve Inequalities that Require Simplification                          | 2.5       |
|            | Unit 2 Review Quiz  |           |
|            | <b>Unit 2 Test</b>  |           |
|            |   |           |
| Week 6-7   | <b>Unit 3: Equations and Their Graphs (Textbook Chapter 3)</b>                  |           |
|            | <b>(Download of Textbook Ch 3 available on MyOpenMath at top of Unit 3)</b>     |           |
|            | Quiz 3A Plot Points in the Rectangular Coordinate System                        | 3.1       |
|            | Quiz 3B Verify Solutions to an Equation in 2 Variables                          | 3.1       |
|            | Quiz 3C Creating Tables of Values and Finding Solutions                         | 3.1       |
|            | Quiz 3D Graph a Linear Equation   | 3.2       |
|            | Quiz 3E Graph Horizontal & Vertical Lines                                       | 3.2       |
|            | Quiz 3F Graph Linear Inequalities in 2 Variables                                | 3.3       |
|            | Quiz 3G Graph Non-Linear Shapes by Tables of Values (pdf on MyOpenMath)         |           |
|            | Unit 3 Review Quiz  |           |
|            | <b>Unit 3 Test</b>  |           |
|            |   |           |
| Week 8-9   | <b>Unit 4: Systems of Equations (Textbook Chapter 4)</b>                        |           |
|            | <b>(Download of Textbook Ch 6 available on MyOpenMath at top of Unit 4)</b>     |           |
|            | Quiz 4A Solve Systems of Equations by Graphing                                  | 4.1       |
|            | Quiz 4B Solve Systems of Equations by Substitution                              | 4.2       |
|            | Quiz 4C Solve Systems of Equations by Elimination                               | 4.3       |
|            | Quiz 4D Solve Applications with Systems of Equations                            | 4.4       |
|            | Quiz 4E Graph Systems of Linear Inequalities                                    | 4.5       |
|            | Unit 4 Review Quiz  |           |
|            | <b>Unit 4 Test</b>  |           |
|            |   |           |
| Week 10-11 | <b>Unit 5: Data Analysis I (Textbook Chapter 7)</b>                             |           |
|            | <b>(Download of Textbook Ch 7 available on MyOpenMath at top of Unit 5)</b>     |           |
|            | Quiz 5A Measures of Central Tendency  | 7.1       |
|            | Quiz 5B Graphs & Tables   | 7.2       |
|            | Quiz 5C Collecting Data & Survey Creation                                       | 7.3 & 7.4 |

|             |   |     |
|-------------|---|-----|
|             | Unit 5 Review Quiz  |     |
|             | <b>Unit 5 Test</b>  |     |
|             |   |     |
|             | <b>Unit 6: Data Analysis II (Textbook Chapter 8)</b>                    |     |
|             | <b>(Download of Text Ch 8 available on MyOpenMath at top of Unit 6)</b> |     |
|             | Quiz 6A Percentiles & Quartiles   | 8.1 |
|             | Quiz 6B Measures of Dispersion (Range and Standard Deviation)           | 8.2 |
|             | Quiz 6C Calculating the Standard Deviation with Technology              | 8.2 |
|             | Quiz 6D The Normal Curve  | 8.3 |
|             | Quiz 6E Z-Scores and the Normal Curve                                   | 8.4 |
|             | Unit 6 Review Quiz  |     |
|             | <b>Unit 6 Test</b>  |     |
|             |   |     |
| Weeks 12-13 | MATH 075 FINAL PRACTICE   |     |
|             | <b>MATH 075 FINAL EXAM</b>  |     |

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

#### EVALUATION OF LEARNING

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A minimum of 70% is needed on each test before proceeding to the next unit.

|             |     |
|-------------|-----|
| Unit 1 Test | 12% |
| Unit 2 Test | 12% |
| Unit 3 Test | 12% |
| Unit 4 Test | 12% |
| Unit 5 Test | 12% |
| Unit 6 Test | 12% |
| Final Exam  | 28% |

#### COURSE GUIDELINES & EXPECTATIONS

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The course is designed to be completed in one term (15 weeks). However, it can be completed sooner, depending on factors including your beginning level of math skills, motivation, learning rate, and how much time you can actually study. On average a student should plan to devote 15 to 20 hours per week to complete the course in one term. If you do not understand something, seek help right away. In addition to your instructor and the online materials, resources include the Math Help Centres (website at <http://camosun.ca/services/help-centres/>) and your family and friends. Students have a responsibility to work hard, attend class and/or meetings, and ask for support when needed

#### SCHOOL OR DEPARTMENTAL INFORMATION

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**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

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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

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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                   | <a href="http://camosun.ca/advising">http://camosun.ca/advising</a>                       |
| Accessible Learning                 | <a href="http://camosun.ca/accessible-learning">http://camosun.ca/accessible-learning</a> |
| Counselling                         | <a href="http://camosun.ca/counselling">http://camosun.ca/counselling</a>                 |
| Career Services                     | <a href="http://camosun.ca/coop">http://camosun.ca/coop</a>                               |
| Financial Aid and Awards            | <a href="http://camosun.ca/financialaid">http://camosun.ca/financialaid</a>               |
| Help Centres (Math/English/Science) | <a href="http://camosun.ca/help-centres">http://camosun.ca/help-centres</a>               |
| Indigenous Student Support          | <a href="http://camosun.ca/indigenous">http://camosun.ca/indigenous</a>                   |
| International Student Support       | <a href="http://camosun.ca/international/">http://camosun.ca/international/</a>           |
| Learning Skills                     | <a href="http://camosun.ca/learningskills">http://camosun.ca/learningskills</a>           |

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| Support Service           | Website   |
|---------------------------|---|
| Library                   | <a href="http://camosun.ca/services/library/">http://camosun.ca/services/library/</a> |
| Office of Student Support | <a href="http://camosun.ca/oss">http://camosun.ca/oss</a>                             |
| Ombudsperson              | <a href="http://camosun.ca/ombuds">http://camosun.ca/ombuds</a>                       |
| Registration              | <a href="http://camosun.ca/registration">http://camosun.ca/registration</a>           |
| Technology Support        | <a href="http://camosun.ca/its">http://camosun.ca/its</a>                             |
| Writing Centre            | <a href="http://camosun.ca/writing-centre">http://camosun.ca/writing-centre</a>       |

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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.

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## COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

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### 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](http://camosun.ca/sexual-violence). To contact the Office of Student Support: [oss@camosun.ca](mailto: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.