



School of Access  
Community Learning Partnerships  
**MATH 052 DS19**  
Intermediate Mathematics 1  
**Course Outline – Winter 2016**

**Instructor:** Morgan Sargent  
**Class Hours:** Online

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**Office Hours:** By Arrangement

### Calendar Description

This course covers the first part of ABE Intermediate Math, and provides the practical computational and problem-solving skills required for daily life and for further study in intermediate-level algebra and math for trades. Topics include: proportion, percent, graphs, statistics, measurement, geometry, and trigonometry.

**Prerequisite(s):** MATH 034, or assessment.

<http://camosun.ca/learn/calendar/current/web/math.html>

### Required Materials

- (a) Reliable access to the internet
- (b) Registration with MathXL: <http://www.pearsonmylabandmastering.com/northamerica/mathxl/students/get-registered/index.html>
- (c) Class access code: **sargent99421**
- (d) scientific calculator (Sharp EL531 is the recommended calculator, and is good through MATH 072)

### Course Content and Schedule – Self-paced Instructions

The course is designed to be completed in one term. However, it can be completed sooner, depending on a number of factors including the students' beginning level of math skills, motivation, learning rate, and how much time they can actually study (**average 15-20 hours per week to complete in 4 months**).

If you do not understand something **seek help right away**. In addition to online, resources include your family and friends, your instructor, and /or the Math Tutor Center.

Contact your instructor to get permission to write the Final exam. The Final Exam must be written with an invigilator.

**Grade Calculation**<sup>1</sup>: Six Unit Exams worth 75% and a Final Exam worth 25%

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<sup>1</sup> As this is a mastery-based course, the goal for each test is 75% or better. If you scored less than 75% then you will need to rewrite the test before you continue. Note: Tests can only be rewritten once for a total of two times and all test scores are averaged to calculate a final mark

### Intended Learning Outcomes

(complete ABE Intermediate Mathematics learning outcomes at ABE Articulation Handbook website <http://www.aved.gov.bc.ca/abe/docs/handbook.pdf>)

At the end of the course, students will be able to:

1. use mathematics at an ABE Intermediate level with competence
2. demonstrate knowledge and skills in using the language, principles, and operations of consumer math (arithmetic, statistics, measurement), geometry, and trigonometry
3. apply a variety of strategies in solving math-related problems
4. apply knowledge and skills in consumer math, geometry, and trigonometry to solve problems
5. use knowledge of consumer math, geometry, and trigonometry as a basis for further study in Intermediate-level algebra and math for trades

### Grading System

| Percentage  | Grade | Grade Point Equivalency |
|-------------|-------|-------------------------|
| 90–100%     | A+    | 9                       |
| 85–89%      | A     | 8                       |
| 80–84%      | A–    | 7                       |
| 77–79%      | B+    | 6                       |
| 73–76%      | B     | 5                       |
| 70–72%      | B–    | 4                       |
| 65–69%      | C+    | 3                       |
| 60–64%      | C     | 2                       |
| 50–59%      | D     | 1                       |
| <50%        | F     | 0                       |
| In Progress | IP    | N/A                     |



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| <b>MATH 052 course content</b>             |   |  |
|--|---|--|
| <b>Unit R – Arithmetic Review – 7 Days</b> |   |  |
| <b>Pre-test</b>                            |   |  |
| R.1  | Place value   |  |
| R.2  | Comparing numbers                                   |  |
| R.3  | Rounding numbers                                    |  |
| R.4  | Adding and subtracting whole numbers and decimals   |  |
| R.5  | Multiplying whole numbers and decimals              |  |
| R.6  | Dividing whole numbers and decimals                 |  |
| R.7  | Order of operations                                 |  |
| R.8  | Operations with fractions                           |  |
| R.9  | Equivalent fractions                                |  |
| R.10                                       | Adding and subtracting fractions                    |  |
| R.11                                       | Multiplying fractions                               |  |
| R.12                                       | Dividing fractions                                  |  |
| R.13                                       | Converting fractions and decimals                   |  |
| R.14                                       | Estimation  |  |
| <b>Post-Test</b>                           |   |  |
| <b>Unit R Final Test</b>                   |   |  |
| <b>Unit 1 – Percent Notation – 14 Days</b> |   |  |
| <b>Pre-test</b>                            |   |  |
| 4.1  | Ratio and proportion                                |  |
| 4.2  | Percent notation                                    |  |
| 4.3  | Percent and fraction notation                       |  |
| 4.4  | Solving percent problems using percent equations    |  |
| 4.5  | Solving percent problems using proportions          |  |
| 4.6  | Applications of percent                             |  |
| 4.7  | Sales tax, commission, discount, and interest       |  |
| 4.8  | Simple interest and compound interest; credit cards |  |
| <b>Post-Test</b>                           |   |  |
| <b>Unit 1 Final Test</b>                   |   |  |

|   |  |  |
|---|--|--|
| <b>Unit 2 – Data, Graphs, and Statistics – 5 Days</b> |  |  |
| <b>Pre-test</b>                                       |  |  |
| 5.1   | Averages, medians, and modes                                   |  |
| 5.2   | Tables and pictographs   |  |
| 5.3   | Bar graphs and line graphs                                     |  |
| 5.4   | Circle graphs  |  |
| <b>Post-Test</b>                                      |  |  |
| <b>Unit 2 Final Test</b>                              |  |  |
| <b>Unit 3 – Measurement – 9 Days</b>                  |  |  |
| <b>Pre-test</b>                                       |  |  |
| A*  | Linear measures: American units and metric units (*Appendixes) |  |
| B*  | Weight and mass; medical applications                          |  |
| C*  | Capacity; medical applications                                 |  |
| D*  | Time and temperature   |  |
| <b>Post-Test</b>                                      |  |  |
| <b>Unit 3 Final Test</b>                              |  |  |
| <b>Unit 4 – Geometry – 14 Days</b>                    |  |  |
| <b>Pre-test</b>                                       |  |  |
| 6.2   | Perimeter  |  |
| 6.3   | Area   |  |
| 6.4   | Circles  |  |
| 6.5   | Volume and surface area  |  |
| 6.8   | Similar triangles  |  |
| <b>Post-Test</b>                                      |  |  |
| <b>Unit 4 Final Test</b>                              |  |  |
| <b>Unit 5 – Trigonometry – 15 Days</b>                |  |  |
| 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  |  |
| <b>Post-Test</b>                                      |  |  |
| <b>Unit 5 Final Test</b>                              |  |  |
| <b>MATH 052 Final Pre-test</b>                        |  |  |
| <b>MATH 052 Final Post-test</b>                       |  |  |
| <b>MATH 052 Final Exam</b>                            |  |  |

## **Recommended Materials or Services to Assist Students to Succeed Throughout the Course**

### **LEARNING SUPPORT AND SERVICES FOR STUDENTS**

There are a variety of services available for students to assist them throughout their learning. This information is available in the College Calendar, Registrar's Office or the College web site at:

<http://www.camosun.ca>

### **STUDENT CONDUCT POLICY**

There is a Student Conduct Policy. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Policy Section, or the College web site at:

<http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf>

### **STUDENT GRADING POLICY**

A new student grading policy is in effect for students in the School of Access. This information is available in the College Calendar, Registrar's Office or the College web site at:

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

### **ACADEMIC PROGRESS POLICY**

There is an Academic Progress Policy designed to enhance a learner's likelihood of success. Students should become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Policy Section or the College web site at:

<http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.1.pdf>