



**CAMOSUN COLLEGE**  
**School of Access**  
**Academic and Career Foundations Department**

**MATH 052 Intermediate Mathematics 1**

**COURSE OUTLINE**

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*The Approved Course Description is available on the College  
website <http://www.camosun.ca/learn/calendar/current/>*

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**1. Instructor Information**

**Instructor:** Alison Bowe  
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Text only: 250.881.0264

**January-April 2015**

| Time          | Monday                     | Tuesday                    | Wednesday                  | Thursday                   | Friday       |
|---------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------|
| 8:30 – 10:30  |                            |                            |                            | Chairs Meeting             |              |
| 10:30 – 11:30 |                            | Help Centre<br>CBA 109     |                            | Chairs Meeting             |              |
| 11:30 – Noon  | Lunch                      | Lunch                      | Lunch                      | Chairs Meeting             |              |
| Noon – 12:30  | Help Centre<br>CBA 109     | Help Centre<br>CBA 109     | Help Centre<br>CBA 109     | Lunch                      |              |
| 12:30- 3:30   | In Class<br>S05<br>CBA 117 | In Class<br>S04<br>CBA 117 | In Class<br>S05<br>CBA 117 | In Class<br>S04<br>CBA 117 | Dept Meeting |
| 3:30 – 5:00   | Office Hours               | Office Hours               | Office Hours               | Office Hours               |              |

**2. 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

### 3. Required Materials

- (a) textbook: *Developmental Mathematics*, 6<sup>th</sup>/7<sup>th</sup>/8<sup>th</sup> edition, Marvin Bittinger/Judith Beecher
- (b) module: *Trigonometry* (ABE Intermediate Mathematics module 14), British Columbia
- (c) scientific calculator (Sharp EL-531X or EL-531W for next level MATH 072 or 135)

#### Supplementary Materials

- (d) *Student's Solutions Manual*, Judith Penna  
(for sale in the bookstore; available for reference in the classroom)
- (e) *Instructor's Solutions Manual*, Judith Penna (for reference in the classroom)
- (f) website [www.mymathlab.com](http://www.mymathlab.com) (online text, tutorials, videos, and testing)

### 4. Course Schedule, Content and Instructions

#### 2015W Semester classes run from January 5 - April 10, 2015

|                        |                |                         |
|------------------------|----------------|-------------------------|
| Other important dates: | February 9     | Holiday, College Closed |
|                        | February 12-13 | Reading Break           |
|                        | March 9        | Withdrawal Deadline     |
|                        | April 3 & 6    | Holiday, College Closed |
|                        | April 10       | Last day of classes     |

The 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 4 months.

**Note:** The first three units of MATH 052 cover essentially the same content as the last three units of MATH 034. At the discretion of the instructor, students who have recently completed MATH 034 may either transfer their 034 units 4–6 test scores to 052 units 1–3, or write the 052 tests for these units to improve their scores and understanding.

- (a) before starting unit 1, students must pass a competency test to demonstrate that they can add, subtract, multiply, and divide whole numbers, fractions, and decimals without the use of a calculator – if necessary, use the Arithmetic Review booklet to review these operations before writing the competency test
- (b) for each section of the 052 text listed in the table below, read the explanations, study the Examples, do the Margin Exercises, and then work through and check all or at least some of the more difficult odd-numbered problems in the Exercise Set
- (c) note that unit 3 is covered by Appendixes A–D at the back of the text, and unit 5 is covered by the supplementary module entitled *Trigonometry*
- (d) to prepare for the final test for each unit, do the Summary and Review Exercises and write the Chapter Test at the end of the chapter, and correct all of your errors
- (e) review your final test results with the instructor, and proceed to the next unit if you score 75% or better, or rewrite the final test if you score less than 75% (all test scores count)

| 8th ed'n | 7th ed'n | MATH 052 course content                           |  |  |
|----------|----------|---------------------------------------------------|--|--|
|          |          | <b>Unit R – Arithmetic Review (no calculator)</b> |  |  |
| R.1      | R.1      | Place value                                       |  |  |
| R.2      | R.2      | Comparing numbers                                 |  |  |
| R.3      | R.3      | Rounding numbers                                  |  |  |
| R.4      | R.4      | Adding and subtracting whole numbers and decimals |  |  |
| R.5      | R.5      | Multiplying whole numbers and decimals            |  |  |
| R.6      | R.6      | Dividing whole numbers and decimals               |  |  |
| R.7      | R.7      | Order of operations                               |  |  |
| R.8      | R.8      | Operations with fractions                         |  |  |
| R.9      | R.9      | Equivalent fractions                              |  |  |
| R.10     | R.10     | Adding and subtracting fractions                  |  |  |
| R.11     | R.11     | Multiplying fractions                             |  |  |
| R.12     | R.12     | Dividing fractions                                |  |  |
| R.13     | R.13     | Converting fractions and decimals                 |  |  |
| R.14     | R.14     | Estimation                                        |  |  |
|          |          | Practice Test                                     |  |  |
|          |          | Unit R final test (no calculator)                 |  |  |

| 8th ed'n | 7th ed'n | MATH 052 course content                                            |         |  |
|----------|----------|--------------------------------------------------------------------|---------|--|
|          |          | <b>Unit 1 – Percent Notation</b> (for 4-month completion: 25 days) |         |  |
| 4.1      | 4.1      | Ratio and proportion                                               |         |  |
| 4.2      | 4.2      | Percent notation                                                   |         |  |
| 4.3      | 4.3      | Percent and fraction notation                                      |         |  |
| 4.4      | 4.4      | Solving percent problems using percent equations                   |         |  |
| 4.5      | 4.5      | Solving percent problems using proportions                         |         |  |
| 4.6      | 4.6      | Applications of percent                                            |         |  |
| 4.7      | 4.7      | Sales tax, commission, discount, and interest                      |         |  |
| 4.8      |          | Simple interest and compound interest; credit cards                |         |  |
|          | 4.8      | Interest rates on credit cards and loans                           |         |  |
|          |          | Summary and review                                                 |         |  |
|          |          | Chapter test                                                       |         |  |
|          |          | Unit 1 final test                                                  |         |  |
|          |          |                                                                    |         |  |
|          |          | <b>Unit 2 – Data, Graphs, and Statistics</b> (15 days)             |         |  |
| 5.1      | 5.1      | Averages, medians, and modes                                       |         |  |
| 5.2      | 5.2      | Tables and pictographs                                             |         |  |
| 5.3      | 5.3      | Bar graphs and line graphs                                         |         |  |
| 5.4      | 5.4      | Circle graphs                                                      |         |  |
|          |          | Summary and review                                                 |         |  |
|          |          | Chapter test                                                       |         |  |
|          |          | Unit 2 final test                                                  |         |  |
|          |          |                                                                    |         |  |
|          |          | <b>Unit 3 – Measurement</b> (15 days)                              |         |  |
| A*       | A*       | Linear measures: American units and metric units (*Appendixes)     |         |  |
| B*       | B*       | Weight and mass; medical applications                              |         |  |
| C*       | C*       | Capacity; medical applications                                     |         |  |
| D*       | D*       | Time and temperature                                               |         |  |
|          |          | Summary and review                                                 |         |  |
|          |          | Unit 3 final test                                                  |         |  |
|          |          |                                                                    |         |  |
|          |          | <b>Unit 4 – Geometry</b> (20 days)                                 |         |  |
| 6.2      | 6.2      | Perimeter                                                          |         |  |
| 6.3      | 6.3      | Area                                                               |         |  |
| 6.4      | 6.4      | Circles                                                            |         |  |
| 6.5      | 6.5      | Volume and surface area                                            |         |  |
| 6.8      | 6.8      | Similar triangles                                                  |         |  |
|          |          | Summary and review                                                 |         |  |
|          |          | Chapter test                                                       |         |  |
|          |          | Unit 4 final test                                                  |         |  |
|          |          |                                                                    |         |  |
|          |          | <b>Unit 5 – Trigonometry</b> (supplementary module) (25 days)      |         |  |
| 5.1      | 5.1      | The right triangle                                                 |         |  |
| 5.2      | 5.2      | Angles and sides                                                   |         |  |
| 5.3      | 5.3      | The Pythagorean theorem (more in 7e text p 1059, 8e tx p 1087)     |         |  |
| 5.4      | 5.4      | The tangent ratio                                                  |         |  |
| 5.5      | 5.5      | Using the tangent ratio                                            |         |  |
| 5.6      | 5.6      | The sine and cosine ratios                                         |         |  |
| 5.7      | 5.7      | Solving triangles                                                  |         |  |
|          |          | Practice test                                                      |         |  |
|          |          | Unit 5 final test                                                  |         |  |
|          |          |                                                                    |         |  |
|          |          | MATH 052 review                                                    |         |  |
|          |          | MATH 052 final exam                                                | day 105 |  |

## 5. Basis of Student Assessment (Weighting)

- (a) **Tests** 75% of the course grade is based on the average of **all** unit final test scores for units 1–5 (including both passing and failing test scores)
- (b) **Exams** 25% of the course grade is based on the average of **all** final exam scores (including both passing and failing exam scores)

**Note:** Students with a record of poor attendance OR poor progress may be restricted from re-registering in Academic and Career Foundations Department courses.

## 6. Grading System

|    |         |    |        |    |             |
|----|---------|----|--------|----|-------------|
| A+ | 90–100% | B+ | 77–79% | C+ | 65–69%      |
| A  | 85–89%  | B  | 73–76% | C  | 60–64%      |
| A– | 80–84%  | B– | 70–72% | IP | in progress |

## 7. Learning Support and Services for Students

### ACADEMIC UPGRADING HELP CENTRE (CBA 109)

Help with coursework, reference & learning materials library,  
computers & printer, quiet testing & study areas

There are many other Camosun services available to help you succeed in and out of the classroom, including education planning, learning and personal support, campus life, work and housing, and getting around. This information is available at Registration or the College web site <http://camosun.ca/services/>

## 8. College Policies

### ACADEMIC PROGRESS

The purpose of this policy is to enhance a learner's likelihood of success, and to encourage the learner to use College resources effectively.

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

### GRADING

The purpose of this policy is to ensure that grading and promotion are consistent and

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

### STUDENT CONDUCT

The purpose of this policy is to provide clear expectations of appropriate academic and non-academic student conduct, and to establish processes for resolution of conduct issues or the imposition of sanctions for inappropriate conduct.

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

