



CAMOSUN COLLEGE
School of Access
Academic and Career Foundations Department

MATH 052 Fundamental Mathematics
S02
Spring 2014, May 6 – June 20, 2014

COURSE OUTLINE

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

Ω Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records.

1. Instructor Information

Keep **talking/noise** to a minimum while in class

| <u>Nicolas Mai Ph: 370 – 3848</u> | | | | | |
|--|------------------------------------|---------------------------------------|--------------------------------|---------------------------------------|--------------------------------------|
| Office: Interurban CBA 149 | | | | | |
| Time | Monday | Tuesday | Wednesday | Thursday | Friday |
| 9:00-10:30 | Office CBA149 | | Office CBA149 | | Office CBA149 |
| 10:30-12:20 | Math S02 CBA 117 | Help Centre CBA 109 12-12:30 | Math S02 CBA 117 | Help Centre CBA 109 12-12:30 | Math S02 CBA 117 |
| 12:30-3:20 | Help Centre CBA 109 1-2 p.m. | Math S04 CBA 117 | Lunch Office CBA 149 | Math S04 CBA 117 | Staff Meeting And Workshops |
| 5:00-7:50 | | Math S07 Ewing 344 Lansdowne | | Math S07 Ewing 344 Lansdowne | |
| <u>e-mail: mai@camosun.bc.ca</u> | | | | | |

OFFICE HOURS BY APPOINTMENT

2. Intended Learning Outcomes

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

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

1. use mathematics at an ABE Fundamental level with competence
2. demonstrate knowledge and skills in using the principles and operations of basic arithmetic, measurement, and data analysis
3. apply a variety of strategies in solving math-related problems
4. apply knowledge and skills in basic arithmetic, data analysis, measurement, and geometry to solve problems related to employment, consumerism, personal finance, and other aspects of daily life
5. use knowledge and skills in arithmetic, data analysis, measurement, and geometry as a basis for further study in algebra, geometry, trades math, and other programs

3. Required Materials

- (a) textbook: *Developmental Mathematics*, 6th or 7th edition, Marvin Bittinger & Judith Beecher
- (b) module: *Trigonometry* (ABE Intermediate Mathematics module 14), British Columbia
- (c) scientific calculator (Sharp EL531W for MATH 072)

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) video CDs (cover each section of the text, for viewing at the college or at home)
- (g) website www.mymathlab.com (online text, tutorials, videos, and testing)

4. Course Content and Schedule

Self-paced Instructions

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)

| 6th ed'n | 7th ed'n | MATH 052 course content | video CD |
|----------|----------|--|----------|
| | | Unit R – Arithmetic Review (no calculator) | |
| R.2 | R.2 | Fraction Notation | |
| R.3 | R.3 | Decimal Notation | |
| | | Arithmetic Review test (no calculator) | |
| | | Unit 1 – Percent Notation (for 4-month completion: 25 days) | |
| 4.1 | 4.1 | Ratio and proportion | 4.1 |
| 4.2 | 4.2 | Percent notation | 4.2 |
| 4.3 | 4.3 | Percent and fraction notation | 4.3 |
| 4.4 | 4.4 | Solving percent problems using percent equations | 4.4 |
| 4.5 | 4.5 | Solving percent problems using proportions | 4.5 |
| 4.6 | 4.6 | Applications of percent | 4.6 |
| 4.7 | 4.7 | Sales tax, commission, discount, and interest | 4.7 |
| 4.8 | 4.8 | Interest rates on credit cards and loans | 4.8 |
| | | Summary and review | |
| | | Chapter test | |
| | | Unit 1 final test | |

| 6th ed'n | 7th ed'n | MATH 052 course content | | video CD |
|----------|----------|--|--|----------|
| | | Unit 2 – Data, Graphs, and Statistics (15 days) | | |
| 5.1 | 5.1 | Averages, medians, and modes | | 5.1 |
| 5.2 | 5.2 | Tables and pictographs | | 5.2 |
| 5.3 | 5.3 | Bar graphs and line graphs | | 5.3 |
| 5.4 | 5.4 | Circle graphs | | 5.4 |
| | | Summary and review | | |
| | | Chapter test | | |
| | | Unit 2 final test | | |
| | | Unit 3 – Measurement (15 days) | | |
| A* | A* | Linear measures: American 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 | | |
| | | Unit 4 – Geometry (20 days) | | |
| 6.1 | 6.1 | Basic geometric figures | | 6.1 |
| 6.2 | 6.2 | Perimeter | | 6.2 |
| 6.3 | 6.3 | Area | | 6.3 |
| 6.4 | 6.4 | Circles | | 6.4 |
| 6.5 | 6.5 | Volume and surface area | | 6.5 |
| 6.6 | 6.6 | Relationships between angle measures | | 6.6 |
| 6.7 | 6.7 | Congruent triangles and properties of parallelograms | | 6.7 |
| 6.8 | 6.8 | Similar triangles | | 6.8 |
| | | Summary and review | | |
| | | Chapter test | | |
| | | Unit 4 final test | | |
| | | Unit 5 – Trigonometry (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 6e text p 1087, 7e text p 1059) | | |
| 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:

1. Effective September 2005, returning self-paced MATH 052 students must start at the beginning of the course (no credit will be given for partial completion of ABMA 040/050 before September 2004).

2. 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. 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, Registration, or on the College website <http://www.camosun.bc.ca/learning-skills/index.html>

ACADEMIC CONDUCT POLICY

It is the student's responsibility to become familiar with the content of the Academic Conduct Policy. The policy is available in each School Administration Office, Registration, and on the College website <http://www.camosun.bc.ca/policies/Education-Academic/E-2-Student-Services-&-Support/E-2.5.pdf>

ACADEMIC PROGRESS POLICY

The 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 website <http://camosun.bc.ca/policies/Education-Academic/E-1-Programming-&-Instruction/E-1.1.pdf>