



*School of Access  
Academic and Career Foundations Department*

**MATH 034 Fundamental Mathematics 7**

**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  
Office: CBA 150

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Text only: 250.881.0264

**May- June 2015**

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:30-11:20		Math S01 CBA 117		Math S01 CBA 117	
11:30-12:30	Office Hours CBA 150 (By Appointment)	Office Hours CBA 150 (By Appointment)	Lab Hours CBA 117 (Drop-in)	Office Hours CBA 150 (By Appointment)	
12:30-3:20	Math S03 CBA 117		Math S03 CBA 117	Office Hours CBA 150 (By Appointment)	Dept. Meeting
3:30-4:30	Office Hours CBA 150 (By Appointment)		Office Hours CBA 150 (By Appointment)	Office Hours CBA 150 (By Appointment)	
4:30-5:00	Lab Hours CBA 117 (Drop-in)		Lab Hours CBA 117 (Drop-in)		
5:00-7:50	Math S05 CBA 117		Math S05 CBA 117		

**2. Intended Learning Outcomes**

(complete ABE Fundamental 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 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*, 8<sup>th</sup> edition, Marvin Bittinger/Judith Beecher
- (b) basic calculator (scientific calculator recommended; Sharp EL-531X or EL-531W for MATH 072/135)

#### Supplementary Materials

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

### 4. Course Schedule, Content and Instructions

#### 2015P Semester classes run from May 4 – June 19, 2015

Other important dates:	May 18	Holiday, College Closed
	June 4	Withdrawal Deadline
	June 19	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.

- (a) for each section of the 034 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 (do not hesitate to ask your instructor whenever you need help)
- (b) 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
- (c) 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)
- (d) calculators may not be used on the final tests for units 1 – 3
- (e) note that unit 6 is covered by parts of chapter 6 and Appendixes A–D at the back of the text

## Course Content

8th ed'n	7th ed'n	MATH 034 course content	4.1	4.1	Unit 4 – Percent Notation (20 days)	
		<b>Unit 1 – Whole Numbers (15 days)</b>	4.2	4.2	Ratio and proportion	
1.1	1.1	Standard notation; order	4.3	4.3	Percent notation	
1.2	1.2	Addition and subtraction	4.4	4.4	Percent and fraction notation	
1.3	1.3	Multiplication and division; rounding and estimating	4.5	4.5	Solving percent problems using percent equations	
1.4	1.4	Solving equations			Solving percent problems using proportions	
1.5	1.5	Applications and problem solving	4.6	4.6	Applications of percent	
1.6 abc	1.6 abc	Exponential notation and order of operations	4.7	4.7 abc	Sales tax, commission, and discount	
1.7	1.7	Factorizations			Summary and review	
1.8	1.8	Divisibility			Chapter test	
1.9	1.9	Least common multiples			Unit 4 final test	
		Summary and review				
		Chapter test				
		Unit 1 final test (no calculator)			<b>Unit 5 – Data, Graphs, and Statistics (15 days)</b>	
			5.1	5.1	Averages, medians, and modes	
		<b>Unit 2 – Fraction Notation (20 days)</b>	5.2	5.2	Tables and pictographs	
2.1	2.1	Fraction notation and simplifying	5.3	5.3	Bar graphs and line graphs	
2.2	2.2	Multiplication and division	5.4	5.4	Circle graphs	
2.3	2.3	Addition and subtraction; order			Summary and review	
2.4	2.4	Mixed numerals			Chapter test	
2.5	2.5	Applications and problem solving			Unit 5 final test	
2.6	2.6	Order of operations; estimation				
		Summary and review				
		Chapter test			<b>Unit 6 – Measurement and Geometry (15 days)</b>	
		Unit 2 final test (no calculator)	A*	A*	Linear measures: American units and metric units (*Appendices)	
		<b>Unit 3 – Decimal Notation (15 days)</b>	B*	B*	Weight and mass; medical applications	
3.1	3.1	Decimal notation, order, and rounding				
3.2	3.2	Addition and subtraction	C*	C*	Capacity; medical applications	
3.3	3.3	Multiplication	D*	D*	Time and temperature	
3.4	3.4	Division	6.2	6.2	Perimeter	
3.5	3.5	Converting from fraction notation to decimal notation	6.3	6.3	Area	
3.6	3.6	Estimating	6.4	6.4	Circles	
3.7	3.7	Applications and problem solving	6.5a	6.5a	Volume and surface area	
		Summary and review			Summary and review	
		Chapter test			Unit 6 final test	day 100
		Unit 3 final test (no calculator)				
8th ed'n	7th ed'n	MATH 034 course content				

### 5. Basis of Student Assessment (Weighting)

**Tests** 100% of the course grade is based on the average of all unit final test scores (including both passing and failing test 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 and learning materials library, computers and printer, quiet testing and 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>

## 9. MATH 034 Essential Skills (based on learning outcomes, coursework and classroom interaction)

**Numeracy:** numerical calculation and measurement (arithmetic, metric and imperial measurement, graphs, data analysis, formulas, geometry)

- Convert between fractions, decimals, and percents
- Add, subtract, multiply and divide rational numbers
- Solve application problems involving arithmetic, metric and imperial measurement, graphs, data analysis, formulas and geometry
- Use order of operations
- Use the common metric and imperial units for temperature, length, volume and mass
- Convert between and within metric and imperial units using tables and/or calculators
- Use formulas to solve related application problems
- Read, write, and use ratios and proportions to solve percent and other application problems
- Extract and interpret information from line, bar and circle graphs
- Draw line and bar graphs
- Solve simple equations, formulas and related application problems
- Use formulas to find perimeter and area of triangles, squares, rectangles, parallelograms, trapezoids, circles and composite figures
- Use formulas to find the surface area and volume of rectangular solids
- Calculate median, mean, and mode

### Reading

- Scan for key information
- Read and correctly follow written directions
- Read a full text to understand, learn or evaluate
- Integrate and synthesize information from multiple sources
- Refer to appropriate written (hardcopy or online) resources when experiencing difficulty

### Document Use

- Interpret information in graphs or charts
- Use a table of contents or index to find specific information

### Writing

- Organize, record and document
- Write notes in point form

### Oral Communication

- Follow oral instructions and explanations
- Seek or obtain information from peers and instructor

### Working with Others

- Work independently alongside others
- Use appropriate and respectful communication with peers and others
- Receive and apply relevant feedback

### Thinking Skills

- Apply prior learning to facilitate effective study and to integrate information from a text with background knowledge from outside the text
- Identify learning strengths
- Identify and set short and long term goals
- Maintain a personalized learning plan within an individualized educational setting
- Identify key facts and issues related to a problem
- Apply a variety of strategies in solving math-related problems
- Check that answers and solutions to problems are reasonable
- Build strategies for successfully writing math tests
- Prioritize tasks
- Use tools (calendars, agendas, checklists) to help organize tasks and for time management
- Identify, compare, contrast & critically evaluate multiple pieces of information while reading/listening/viewing

### Digital Technology

- Use a scientific calculator
- May use online tools to communicate and to learn and practice mathematical skills

### Continuous Learning

- Deepen understanding of skill strengths and areas in need of improvement
- Recognize preferred learning styles (learning by seeing, hearing or doing)
- Try new ways of doing things