



School of Access
Community Learning Partnerships

Mathematics 034 D19
Fundamental Mathematics 7
2012 Winter Course Outline

This course outline is available online at <http://faculty.camosun.ca/martinbuck/courses/>

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

Calendar Description

See the Mathematics Course Descriptions and Prerequisites at <http://camosun.ca/learn/calendar/2011/web/math.html>

Course Requirements:

- a) An Access Code for our online classroom based on *Developmental Mathematics*, 6th or 7th edition, Marvin Bittinger & Judith Beecher. This access code is available for purchase online at the publisher's website -- <http://mathxl.com>.
NOTE: The Access Code also provides access to a plethora of textbook publisher online resources including animations, videos, podcasts and digital pages of the textbook. A hard copy of the text book is option.
- b) Unrestricted access to an Internet connected computer. See Computer System Requirements at <http://mathxl.com/support/system.htm>.
- c) Scientific calculator. If you're headed for higher levels of math, the Sharp EL 531W model is the only calculator allowed for math department courses at Camosun.

NOTE: More details on the MathXL registration process are available at <http://faculty.camosun.ca/martinbuck/gaining-access/>

Important Dates

See <http://camosun.ca/learn/calendar/current/important-dates.html>

Instructor Information

Instructor -- Martin Buck

- a) Office hours: 24 hours a day and seven days a week. See the contact info below. Expect a response within one school day. Skype and phone appointments with the instructor are also available by prior arrangement.
- b) Location: The online classroom is located at <http://mathxl.com>.
- c) Instructor's website: <http://faculty.camosun.ca/martinbuck>
Students are invited to join my math circle at Google + by clicking on this link <https://plus.google.com/i/1k-fvVjrv38:mjHUmLBAeN0>
- d) E-mail: martin@lwebs.ca
Skype: [mbuck_skype](https://www.skype.com/people/mbuck_skype)

Course Information

This mastery learning and fixed paced course is designed to be completed in one term or less. Depending on your beginning level of math skills, motivation, learning rate, and how much time you can actually devote to learning math; you may be able to complete more than one level per term.

Your first task is to ensure your browser is properly configured. Click on the [Browser Check](#) button and follow the instructions there. Then click on the [How to Enter Answers](#) link for information about entering math notation. Then log into <http://mathxl.com>.

The course homepage will list the assignments due next. The **Calendar** button will show the whole course schedule of assignment due dates. Plan on completing each assignment several days ahead of the due date. If you devote at least 15 – 20 hours per week to the course, you should have no problem completing in one term or less. As soon as you complete one course, I can move you on to the next. To complete each unit, follow the steps below:

- (a) Login and click on the **Homework and Tests** button. Your first assignment is the unit pre-test. NOTE: The pre-test is NOT a formal test. It's a tool to help us figure out the gaps in your math learning. Take as much time as you need. As long as you do NOT submit the pre-test, you can close it down and then return to it later. Beside each question you will see a number of tutorial buttons to help you master each question. Be sure to use these to help you master each question. You can exit out of the pre-test and return later as long as you do not hit the Submit button. Once you have submitted the pre-test, the online system will mark it and allow you to review your results.
- (b) To review your test results, click on the **Results** button. Figure out where you went wrong and why. With the unit pre-test reviewed, return to the **Homework and Tests** area. You will be assigned exercises based on your pre-test results. Move on to the Section Homework and complete the assigned homework exercises to the 100% level. If you need more practice, click on the **Study Plan** button. While there are hundreds of exercises there, the ones to focus on are those with the pencil icon beside them. You can also see a list of just the assigned exercises by clicking on the **Show What I Need to Study** button. For each question, make use of the Tutorial Buttons to help you master each question.
- (c) With all the section homework assignments successfully completed, return to the **Homework and Tests** area. Complete the Unit Post-test assignment. Like the pre-test, there is no need to complete this in one sitting. However, this review will be completed without benefit of the tutorial buttons. If you score of 80% or better, you may move right along to the Unit Final Test. Otherwise, return to the Study Plan area to complete the assigned exercises for this unit. Once you have completed the assigned Study Plan exercises, contact your instructor for permission to write the Unit Final.
- (d) Complete the unit by writing the Unit Final Test. The unit final tests must be completed in one sitting. While they are designed to be completed in less than an hour, you will have two hours. You will NOT be allowed to exit out and return later. NOTE: You will need a stable, wired (not wireless) Internet access to complete the Unit Exams. If you find you are being denied access to complete a unit exam, we will have to make arrangements for you to write in one of our math labs or other supervised (invigilated) location with stable Internet access. As long as you score 75% or better, you will be able to proceed to the next unit. If you score less than 75% you will be allowed to rewrite each Unit Test *once* (for a total of two times) to achieve mastery. Note: All test scores count towards your final grade for the course.

Repeat the above process for the remaining units. For a visual guide to how the online system works, visit http://faculty.camosun.ca/martinbuck/files/2011/07/MathXL_Visual_Learning.pdf. There is no final exam for Math 034.

The Math 034 online course has been divided into two sections, Math 034A and Math 034B. Math 052 begins with a review of the Math 034B content. That means students who make good progress in Math 034A and are heading on to Intermediate Mathematics 052/053 may be eligible to bypass 034B and move directly to Math 052. If you believe you are eligible, contact your instructor for more information.

Assignments

The due dates for the pre-tests as well as the homework assignments and unit tests will be found under the **Calendar** button on the course homepage at <http://mathxl.com>. You are responsible for regularly checking the website and completing the assignments ahead of the due dates. Please note that the MathXL system keeps track of how much time you devote to each of the assignments. If you miss a due date for a pre-test, a score of zero will be applied and you will be allowed to move on to the Homework Assignments. Late penalties of 10% per day will be applied to those who miss Homework Assignment, post-test and unit final test due dates. In any event the last day to submit assignments will be last day of instruction for the term as listed at the [college website](#).

Tips for Success

The secret to success in math is practice, practice and practice. Plan on spending 15 to 20 hours each week on your math. Do your homework every day. Work several days ahead of assignment due dates. This is a course you cannot put on the back burner. While the use of the multimedia materials of animations, podcasts and videos is optional, they can explain things in an easy to understand way. You will find links to these under the **Homework and Tests** button in the online classroom.

| | | |
|---------------------------|-----------------------------|-----|
| Grade Calculation: | Online Pre and Post-tests | 20% |
| | Online Homework Assignments | 20% |
| | Study Plan Exercises | 10% |
| | * Unit Final Tests | 50% |

* As this is a mastery-based course, the goal for each unit final test is 75% or better. If you scored less than 75% then you will need to rewrite the unit final 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.

Standard Grading System (GPA)

| Percentage | Grade Description | 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 |

Academic Policies

For information on Camosun College's academic policies including grading and academic progress, see the webpage at

<http://camosun.ca/learn/becoming/policies.html>

Assignments

See your online course for due dates.

| Unit | MATH 034A course content |
|------|---|
| | Unit 1 – Whole Numbers |
| | Unit 1 Pre-test |
| 1.1 | Standard notation; order |
| 1.2 | Addition and subtraction |
| 1.3 | Multiplication and division; rounding and estimating |
| 1.4 | Solving equations |
| 1.5 | Applications and problem solving |
| 1.6 | Exponential notation and order of operations |
| 1.7 | Factorizations |
| 1.8 | Divisibility |
| 1.9 | Least common multiples |
| | Summary and review |
| | Chapter test |
| | Unit 1 Post-test |
| | Unit 1 Exam (no calculator) |
| | |
| | Unit 2 – Fraction Notation |
| | Unit 2 Pre-test |
| 2.1 | Fraction notation and simplifying |
| 2.2 | Multiplication and division |
| 2.3 | Addition and subtraction; order |
| 2.4 | Mixed numerals |
| 2.5 | Applications and problem solving |
| 2.6 | Order of operations; estimation |
| | Summary and review |
| | Chapter test |
| | Unit 2 Post-test |
| | Unit 2 Exam (no calculator) |
| | |
| | Unit 3 – Decimal Notation |
| | Unit 3 Pre-test |
| 3.1 | Decimal notation, order, and rounding |
| 3.2 | Addition and subtraction |
| 3.3 | Multiplication |
| 3.4 | Division |
| 3.5 | Converting from fraction notation to decimal notation |
| 3.6 | Estimating |
| 3.7 | Applications and problem solving |
| | Summary and review |
| | Chapter test |
| | Unit 3 Post-test |
| | Unit 3 Exam (no calculator) |
| | |
| | Unit 4 – Percent Notation |
| | Unit 4 Pre-test |
| 4.1 | Ratio and proportion |
| 4.2 | Percent notation |
| 4.3 | Percent and fraction notation |
| 4.4 | Solving percent problems using percent equations |
| | Chapter test |
| | Summary and review |
| | Chapter test |
| | Unit 4 Post-test |
| | Unit 4 Exam |

| Unit | MATH 034B course content |
|------|---|
| | <i>Unit 4 – Percent Notation</i> |
| | <i>Unit 4 Pre-test</i> |
| 4.5 | Solving percent problems using proportions |
| 4.6 | Applications of percent |
| 4.7 | Sales tax, commission, discount, and interest |
| 4.8 | Interest rates on credit cards and loans |
| | Summary and review |
| | Chapter test |
| | <i>Unit 4 Post-test</i> |
| | <i>Unit 4 Exam</i> |
| | |
| | <i>Unit 5 – Data, Graphs, and Statistics</i> |
| | <i>Unit 5 Pre-test</i> |
| 5.1 | Averages, medians, and modes |
| 5.2 | Tables and pictographs |
| 5.3 | Bar graphs and line graphs |
| 5.4 | Circle graphs |
| | Summary and review |
| | Chapter test |
| | <i>Unit 5 Post-test</i> |
| | <i>Unit 5 Exam</i> |
| | |
| | <i>Unit 6 – Measurement and Geometry</i> |
| | <i>Unit 6 Pre-test (Completed under supervised conditions)</i> |
| A* | Linear measures: American and metric units (*Appendixes) |
| B* | Weight and mass; medical applications |
| C* | Capacity; medical applications |
| D* | Time and temperature |
| 6.2 | Perimeter |
| 6.3 | Area |
| 6.4 | Circles |
| 6.5 | Volume and surface area |
| | Summary and review |
| | <i>Unit 6 Post-test</i> |
| | <i>Unit 6 Exam</i> |