



**School of Access  
Community Learning Partnerships**

## **Mathematics 072 (Online)** **Advanced Mathematics 1** **Course Outline**

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**This course outline is available online at**

<http://faculty.camosun.ca/martinbuck/files/2011/07/MATH072.pdf>

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

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### **Calendar Description**

See the Mathematics Course Descriptions and Prerequisites at

<http://camosun.ca/learn/calendar/2011/web/math.html>

### **Course Materials:**

- (a) Textbook: *Intermediate Algebra*, 10<sup>th</sup> or 11<sup>th</sup> edition, Marvin Bittinger. An Access Code for the online classroom 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 resources including animations, videos, podcasts and digital pages of the textbook.
- (b) Computer System Requirements: See <http://mathxl.com/support/system.htm>.
- (c) Scientific calculator: The Sharp EL 531W model is the only calculator allowed for this course and most math courses at Camosun. See [http://sharp-world.com/contents/calculator/support/guidebook/pdf/Operation\\_Guide\\_EL-531W\\_ser.pdf](http://sharp-world.com/contents/calculator/support/guidebook/pdf/Operation_Guide_EL-531W_ser.pdf) for the operation guide.

NOTE: Contact your instructor by email when you have completed the signup procedures for MathXL. He will provide you with a course id code for entry to your online classroom.

### **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 via the online classroom. Expect a response within one school day or less. Skype and phone appointments with the instructor are also available by prior arrangement.
- b) Location: The online classroom is available to registered students at <http://mathxl.com>.
- c) Instructor's website: <http://faculty.camosun.ca/martinbuck>  
Facebook group: [Camosun Math Online](#)
- d) E-mail: [martin@lwebs.ca](mailto:martin@lwebs.ca)  
Skype: [mbuck\\_skype](#)

## Course Information

This mastery learning or competency based 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. If you devote at least 15 – 20 hours per week to the course following the steps below you should have no problem completing in one term or less.

- (a) Log into <http://mathxl.com>. Be sure your browser is properly configured by clicking on the [Browser Check](#) button. You will also want to click on the [How to Enter Answers](#) tours and tip sheets for information about entering math notation. With that done, click on the **Homework and Tests** button. At the beginning of each unit are links to animations, podcasts, videos and digital pages of your text. Your first assignment for marks is the unit pre-test. 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 resources to help you master each question. Be sure to use these and any other resources, like your text, to help you master each question. Once you have submitted the pre-test, the online system will mark it and allow you to review your results. You can also click on the **Results** button at any time to review the assignments you had trouble with and figure out where you went wrong.
- (b) With the unit pre-test reviewed, return to the **Homework and Tests** area. Move on to the Section Homework and complete the assigned homework exercises. To demonstrate mastery, aim for a score of 80% or better on each homework assignment. Note: You will be assigned exercises that the pre-test identified as areas you need to work on. Be sure to keep up with the schedule identified on the course homepage and in the **Calendar** area. Work through all the online homework assignments. 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. The icon indicates you need more work in this area. You can also see a list of assigned exercises by clicking on the **Show What I Need to Study** button. For each question, make use of the resources available to help you master each question.
- (c) With all the section homework assignments mastered at an 80% or better level, return to the **Homework and Tests** area to complete the Unit Review assignment. If you scored less than 80% on the homework assignments, you will need to contact your instructor for permission to write. Like the pre-test, there is no need to complete this in one sitting. However, this review should be completed without accessing any other resources. If you score of 80% or better, you may move right along to the Unit Test. Otherwise, return to the Study Plan area to complete the assigned exercises for this unit.
- (d) Complete the unit by writing the Unit Test. If you scored less than 80% on the Unit Review, you will need to contact your instructor for permission to write. The unit final tests will also be written online. However, they must be completed in one sitting. You will NOT be allowed to exit out and return later. While they are designed to be completed in less than an hour, you will have two hours. 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, you will have to make arrangements 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. The final exam will three hours long and written online, but under invigilated conditions. Students taking the course at a distance may arrange for appropriate invigilation at a local learning centre, school, college or library. Email your instructor when you have found an appropriate invigilator. If you are ready to write the final exam before the end of the term, contact your instructor to set up a time and place to write.

NOTE: Before starting unit one, you must complete a review unit to demonstrate basic algebra skills. This Review Unit is not used in the calculation of your final grade. If you have difficulty with this unit, you will need to complete more extensive review. If you recently completed Math 053, you may be eligible for advanced credit for this unit. 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 on the course homepage at <http://mathxl.com>. Click on the Calendar button for specific assignment due date information. You are responsible for regularly checking the website and completing the assignments on time. Please note that the MathXL system keeps track of how much time you devote to each of the assignments. Late penalties of 10% per day may be applied for those who do not devote enough time to meet the assignment due dates.

## 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. If you fall behind the schedule to complete this term, it will be very difficult to catch up. 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 at the beginning of each unit under the Homework and Test button in the online classroom.

<b>Grade Calculation:</b>	*Online Pre and Post-tests	20%
	*Online Homework and Study Plan Assignments	30%
	**Five Unit Tests	10%
	***Final Exam	40%

\*The goal for each pre-test and homework assignment is 80% or better.

\*\*If you score less than 75% on a unit test, 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.

\*\*\*Based on the average of **all** final exam scores

## 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 student conduct, grading and academic progress, see the webpage at

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

## Assignments

See your online course at <http://mathxl.com> for specific assignment details and due dates.

Text	MATH 072 course content
	<b>Unit 0 – Review of Basic Algebra</b>
	<b>Unit 0 (Review) Pre-test</b>
R.1	The set of real numbers
R.2	Operations with real numbers
R.3	Exponential notation and order of operations
R.4	Introduction to algebraic expressions
R.5	Equivalent algebraic expressions
R.6	Simplifying algebraic expressions
R.7	Properties of exponents and scientific notation
	Chapter Review
	<b>Unit 0 (Review) Post-test</b>
	<b>Unit 0 Final</b>
	<b>Unit 1 Solving Linear Equations and Inequalities</b>
	<b>Unit 1 Pre-test</b>
1.1	Solving equations
1.2	Formulas and applications
1.3a	Applications and problem solving
	Mid-Chapter Review
1.4	Sets, inequalities, and interval notation
1.5	Intersections, unions, and compound inequalities
1.6a-d	Absolute-value equations
	Chapter Review
	<b>Unit 1 Post-test</b>
	<b>Unit 1 Final</b>
	<b>Unit 2 Graphs, Functions, and Applications</b>
	<b>Unit 2 Pre-test</b>
2.1	Graphs of equations
2.2	Functions and graphs
2.3	Finding domain and range
	Mid-Chapter Review
2.4	Linear functions: graphs and slope
2.5	More on graphing linear equations
2.6	Finding equations of lines; applications
	Chapter Review
	<b>Unit 2 Post-test</b>
	<b>Unit 2 Final</b>
	<b>Unit 3 Systems of Equations</b>
	<b>Unit 3 Pre-test</b>
3.1	Systems of equations in two variables
3.2	Solving by substitution
3.3	Solving by elimination
3.4a	Solving applied problems: two equations
	Mid-Chapter Review
3.7ab	Inequalities in two variables
	Chapter Review
	<b>Unit 3 Post-test</b>
	<b>Unit 3 Final</b>

MATH 072 course content	
Text	
	<b><i>Unit 4 Polynomials and Polynomial Functions</i></b>
	<b>Unit 4 Pre-test</b>
<b>4.1</b>	Introduction to polynomials and polynomial functions
<b>4.2</b>	Multiplication of polynomials
<b>4.3</b>	Introduction to factoring
<b>4.4</b>	Factoring trinomials: $x^2 + bx + c$
	Mid-Chapter Review
<b>4.5</b>	Factoring trinomials: $ax^2 + bx + c, a \neq 1$
<b>4.6</b>	Special factoring
<b>4.7</b>	Factoring: a general strategy
	Chapter Review
	<b>Unit 4 Post-test</b>
	<b>Unit 4 Final</b>
	<b><i>Unit 5 Rational Exponents</i></b>
	<b>Unit 5 Pre-test</b>
<b>6.1</b>	Radical expressions and functions
<b>6.2</b>	Multiplication of polynomials
	Chapter Review
	<b>Unit 5 Post-test</b>
	<b>Unit 5 Final</b>
	<b>MATH 072 Final Pre-test</b>
	<b><i>MATH 072 Final Post-test</i></b>
	<b>MATH 072 Final Exam</b>