



Mathematics 137-001 2014 Fall Algebra and Triangle Trigonometry

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Important Dates:	Sep 2	First day of classes for Fall term
	Sep 16	Fee Deadline
	Oct 13	Thanksgiving Day –College closed
	Nov 3	Withdrawal Deadline
	Nov 11	Remembrance Day–College closed
	Dec 6	Last day of classes for Fall term
	Dec 8-13, 15, 16	Final Exam Period

1. Intended Learning Outcomes

This course provides a foundation for the further study of mathematics. Topics include linear equations and inequalities; function notation; linear functions; systems of linear equations in two variables; polynomial, rational and radical expressions and equations; quadratic functions and equations; and triangle trigonometry including the Sine and Cosine Laws. [5 Credits] Source: Camosun College 2013/20124 Calendar <http://camosun.ca/learn/calendar/current/web/math.html>

2. Course Materials and Support

Required Materials:

- M.L. Bittinger**, *Intermediate Algebra*, 11th Edition, Addison-Wesley, Boston, 2011
- Trig module for Unit 5: Trigonometry (2005) Beecher/Penna/Bittinger

Supplementary Materials:

- Student's Solutions Manual, Judith Penna (for sale at the bookstore, reference library)
- Videotapes and CD's covering each section of the text in the library viewing room (free-3 day loan)

CALCULATOR

The only calculator allowed on tests and the final exam is the **Sharp EL531 W** scientific calculator.

Math Labs: Ewing 342 & 224 (LANS) and Tec142 (INT): These drop-in centres are available for you to work on math homework and to seek free help from the tutor on staff. See the hours posted on the math lab doors (most current) or go to <http://camosun.ca/learn/programs/math/labs.html>

Study Tips: It is recommended that approximately 8-12 hours per week be spent studying for this course outside of class time. Find a study buddy to discuss math problems and get notes if you have to miss class.

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, Registrar's Office or the College web site at <http://camosun.ca/>

3. Prerequisites and Exit Grade

Prerequisite(s): "B" in Applications of Math 11; or "C" in Principles of Math 10, or Foundations of Math & Pre-calculus 10, or Foundations of Math 11, or Applications of Math 12, or MATH 053; or "C-" in Principles of Math 11, or Pre-calculus 11; or assessment.

Exit Grade and Course Options:

B+ for Math 115

C+ for Math 105, 107, 109

C for Math 112

4. Basis of Student Assessment (Grading)

Assignments: There are 5 assignments which are based on questions from your textbook. The assignment questions are listed in the Recommended HW and Assignments document.

Assignments are due on the designated days (see pacing schedule) and assignment keys will be posted on the website shortly afterwards.

Late assignments will NOT be accepted.

All assignments count.

Tests: **There are 5 in class tests.** . If you must miss one test due to illness or family affliction contact me via e-mail **before** the test to make alternate arrangements. If you don't provide a reason for a missed test you may get a zero on that test. All tests count.

Final Exam: The final exam will cover the entire course and will be 3 hours long.

All final exams will occur during the final exam period, Dec 8-13,15,16.

Students MUST be available to write the final exam at the scheduled time.

As stated in the current college calendar "students are expected to write tests and final examinations at the scheduled time and place." Exceptions will only be considered due to emergency circumstances as outlined in the calendar. Holidays or scheduled flights are not considered to be emergencies.

Grade Calculation: The final grade will be calculated according to the following breakdown:

5 Assignments:	10%
5 Tests	40%
Comprehensive Final Exam:	50%

All assignments and tests count.

Grade Scale:

0-49	50-59	60-64	65-69	70-72	73-76	77-79	80-84	85-89	90-100
F	D	C	C+	B-	B	B+	A-	A	A+

For information on Camosun College's grading policy, see the webpage <http://camosun.ca/about/policies/education-academic/e-1-programming-&-instruction/e-1.5.pdf>

Academic Progress: The College has an academic progress policy geared mainly toward "at risk" students, the stated intention for which is to improve a student's likelihood of success. To view the policy, see the webpage <http://camosun.ca/about/policies/education-academic/e-1-programming-&-instruction/e-1.1.pdf>

5. Course Content

Section		Section	
	Review of Basic Algebra		Rational Expressions, Equations, and Functions
R.1	Set of Real Numbers	5.1	Rational Expressions, Functions: Mult./Div.
R.2	Operations with Real Number	5.2	LCMs, LCDs, Addition and Subtraction
R.3	Exponential Notation and Order of Operations	5.3	Division of Polynomials
R.4	Introduction to Algebraic Expressions	5.4	Complex Rational Expressions
R.5	Equivalent Algebraic Expressions	5.5	Solving Rational Equations
R.6	Simplifying Algebraic Expressions	5.6	Applications and Proportions
R.7	Properties of Exponents and Scientific Notation	5.7	Formulas and Applications
Test 1 Chap R		5.8	Variation and Applications
	Solving Linear Equations and Inequalities		Radical Expressions, Equations, and Functions
1.1	Solving Equations	6.1	Radical Expressions and Functions
1.2	Formulas and Applications	6.2	Rational Numbers as Exponents
1.3	Applications and Problem Solving	6.3	Simplifying Radical Expressions
1.4	Sets, Inequalities, and Interval Notation	6.4	Addition, Subtraction, and More Multiplication
1.5	Intersections, Unions, and Compound Inequalities	6.5	More on Division of Radical Expressions
1.6	Absolute-Value Equations and Inequalities	6.6	Solving Radical Equations
	Graphs, Functions, and Applications	6.7	Applications Involving Powers and Roots
2.1	Graphs of Equations	6.8	The Complex Numbers
2.2	Functions and Graphs	Test 4 Chap 5&6	
2.3	Finding Domain and Range		Quadratic Equations and Functions
2.4	Linear Functions: Graphs and Slope	7.1	Basics of Solving Quadratic Equations
2.5	More on Graphing Linear Equations	7.2	The Quadratic Formula
2.6	Finding Equations of Lines: Applications	7.3	Applications Involving Quadratic Equations
Test 2 Chap 1&2		7.4	More on Quadratic Equations
	Systems of Equations	7.5	Graphing $f(x) = a(x-h)^2 + k$
3.1	Systems of Equations in Two Variables	7.6	Graphing $f(x) = ax^2 + bx + c$
3.2	Solving by Substitution	7.7	Mathematical Modeling with Quadratic Functions
3.3	Solving by Elimination		Trigonometry
		5.1*	Trig functions of Acute Angles
3.4a	Solving Applied Problems	5.2*	Applications of Right Triangles
3.7ab	Systems of Inequalities in Two Variables	5.3*	Trig Functions of Any Angles
	Polynomials and Polynomial Functions	7.1*	The Law of Sines
4.1	Introduction to Polynomials and Polynomial Functions	7.2*	The Law of Cosines
4.2	Multiplication of Polynomials	Test 5 Chap 7 and Trig	
4.3	Introduction to Factoring	Final Cumulative Exam	
4.4	Factoring Trinomials: $x^2 + bx + c$		
4.5	Factoring Trinomials: $ax^2 + bx + c$		
4.6	Special Factoring		
4.7	Factoring: A General Strategy		
4.8	Applications of Polynomial Equations		
Test 3 Chap 3&4			