Mathematics 137-003-2013 Fall
Algebra and Triangle Trigonometry

Instructor   Bogdan Verjinschi   **E-mail:** verjinschi@camosun.bc.ca
Lansdowne Office   Ewing 244   **Phone**: 250-370-3494

Website (*under reconstruction***): http://verjinschi.disted.camosun.bc.ca/**

Office hours M, Tu, , W, Th, 1:30-2:20   or by appointment

Important Dates:
	Sep 3	First day of classes for Fall term
	Sep 17	Fee Deadline
	Oct 14	Thanksgiving Day –College closed
	Nov 4	Withdrawal Deadline
	Nov 11	Remembrance Day–College closed
	Dec 7	Last day of classes for Fall term
	Dec 9-14, 16, 17	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: **a) The M.L**. Bittinger, *Intermediate Algebra*, 11th Edition, Addison-Wesley, Boston, 2011

b) Trig module for Unit 5: Trigonometry (2005) Beecher/Penna/Bittinger

Supplementary Materials:
   a) Student's Solutions Manual, Judith Penna (for sale at the bookstore, reference library)
   b) 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

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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/

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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: The Review Assignment is a handout that has been e-mailed to you and is available from your teacher.   It is due on the 2nd day of class.

There are 4 other assignments which are based on questions from your textbook. The assignment questions are listed in this outline.

Assignments are due on the designated day (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.** The dates and topics are on the pacing schedule.
If you miss a test for any reason (including illness, sleeping in, getting called into work etc.) a zero will be assigned. If you must miss more than one test due to illness contact me via e-mail before the test to make alternate arrangements.

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 count.

*The lowest of the five marks will be dropped when calculating the/assignment/test average.

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			