



CAMOSUN COLLEGE
School
Department

Mathematics 137-001 2016 Fall
Algebra and Triangle Trigonometry

COURSE OUTLINE

The calendar description is available on the web @ _____

Ω Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.

1. Instructor Information

- (a) **Instructor** Bogdan Verjinschi
- (b) **Office hours** M,T,W,F 12:30-1:30 , Th 1:30- 2:30
- (c) **Location** Ewing 244
- (d) **Phone** 250-370-3494 **Alternative:** _____
- (e) **E-mail** verjinschi@camosun.bc.ca
- (f) **Website** <http://verjinschi.disted.camosun.bc.ca/>
-

2. 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 2013/2014Calendar <http://camosun.ca/learn/calendar/current/web/math.html>

3. Required Materials

Required Materials:

a) M.L. Bittinger, *Intermediate Algebra*, 12th 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, loan reference library)
- b) Videotapes and CD's covering each section of the text in the library viewing room (free-3 day loan)

c) CALCULATOR

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

4. Course Content and Schedule

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 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	7.2*	The Law of Cosines

	Polynomials and Polynomial Functions	
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		

5. Basis of Student Assessment (Weighting)

(a) Assignments 10%

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.

(b) TESTS There are 5 in class tests. 40%

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.

(c) Final Exam: 50%

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 12-20

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.

6. Grading System

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>

7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

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, Student Services or the College web site at <http://www.camosun.bc.ca>

STUDENT CONDUCT POLICY

There is a Student Conduct Policy. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Policy Section.
<http://www.camosun.bc.ca/policies/policies.html>

Academic Integrity: The Department of Mathematics and Statistics has prepared a "red handout" called *Student Guidelines for Academic Integrity* to help you interpret college policies involving student conduct, academic dishonesty, plagiarism, etc. **It is your responsibility to become familiar with the contents of the document and the college policies it references.**

Important Dates:	Sep 6	First day of classes for Fall term
	Sep 20	Fee Deadline
	Oct 10	Thanksgiving Day –College closed
	October 20	ShakeOut - BC provincial preparedness
	Nov 8	Withdrawal Deadline
	Nov 11	Remembrance Day–College closed
	Dec 10	Last day of classes for Fall term
	Dec 12-20	Final Exam Period

A. GRADING SYSTEMS <http://www.camosun.bc.ca/policies/policies.php>

The following two grading systems are used at Camosun College:

1. 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
0-49	F	Minimum level has not been achieved.	0

2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course, practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

B. Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at <http://www.camosun.bc.ca/policies/E-1.5.pdf> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.