Mathematics 137-002
Algebra and Triangle Trigonometry
Fall, 2014

Instructor: Cathy Frost **E-mail:** frost@camosun.bc.ca
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Timetable:

Time	Monday	Tuesday	Wed	Thursday	Friday
1:30-2:20pm	Office Hour		Office Hour		
2:30-4:20pm	Math 137 E348	Math 137 E348	Math 137 E348	Math 137 E348	
4:30-5:50pm		Office Hour		Office Hour	
6:00-7:50pm		Math 135 E348		Math 135 E348	
Additional Office Hours by Appointment					

Important Dates:

Sep 2	First day of classes for Fall term
Sep 16	Fee Deadline
Oct 13	Thanksgiving Holiday- 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 Calendar http://camosun.ca/learn/calendar/current/web/math.html

2. Course Materials and Support
Required Materials:
a) M.L. Bittinger, *Intermediate Algebra*, 11th Edition, Addison-Wesley, Boston, 2011
b) Trigonometry supplement (packaged with above)
c) The only calculator allowed on tests and the final exam is the Sharp EL-531W scientific calculator.

Supplementary Materials:
a) Math 137 Course Pack, Frost
b) Student's Solutions Manual, Judith Penna (for sale at the bookstore, reference library
c) Videotapes and CD's covering each section of the text in the library viewing room (free-3 day loan
d) MathXL (online text, tutorials, videos, and self-testing). The access code can be purchased online at www.mathxl.com . Once you're registered choose 'Independent Study' and then your textbook.

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.

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 to http://camosun.ca/services/help-centres/math-access.html

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 107 C for Math 112 or 109

Note that Math 137 cannot be used by BBA students to satisfy the UT math requirement although it can satisfy the pre-requisites.

4. Basis of Student Assessment (Grading)

Assignments: There are 5 assignments which are based on questions from your textbook and will help prepare you for the tests. **Submit your homework assignments on the templates provided in class or print them from the website on legal paper.** Each question should be written with a full solution, not just the answer.

Assignments are due **by 5:00pm** on the designated day (see pacing schedule) and assignment keys will be posted on the website shortly afterwards. Late assignments will NOT be accepted.

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, unless you 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%

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, Recommended Practice Problems, Test and Assignment Dates

It is strongly recommended that you do most of these problems. Your assignments and tests are based on what we do in class and on these homework questions.

Text: *Intermediate Algebra*, 11th edition, Bittinger

Sec.	Topic	Recommended Practice Problems (not to be handed in)	Assignment and Test Dates
R.1	Set of Real Numbers	3, 11, 15, 17, 23, 33, 39, 41, 45, 49, 51, 59, 63	Asst 1 due Sep 11 Test 1 Sep 16
R.2	Operations with Real Numbers	5, 15, 23, 51, 53, 71, 75, 77, 87, 89, 95, 103, 109, 113	
R.3	Order of Operations	45, 55, 59, 67, 85, 97, 105, 107	
R.4	Introduction Algebraic Expressions	1, 3, 13, 15, 17, 23, 25, 31, 35, 37, 41, 45	
R.5	Equivalent Algebraic Expressions	1, 7, 11, 19, 21, 25, 31, 35, 37, 41, 45, 47, 53, 59	
R.6	Simplifying Algebraic Expressions	11, 15, 21, 23, 27, 35, 41, 43, 47, 53, 57, 67	
1.1	Solving Equations	9, 11, 23, 35, 37, 43, 47, 51, 55, 59, 61, 63, 69, 73, 77, 79	
1.2	Formulas and Applications	1, 5, 9, 13, 17, 19, 21, 23, 27, 29, 37	
1.3	Applications and Problem Solving	1, 5, 7, 9, 13, 15, 21, 23	
1.4	Sets, Inequalities, Interval Notation	3, 5, 7, 9, 11, 13, 17, 27, 35, 37, 41, 43, 47, 55, 59, 63, 71, 73, 77, 85	
1.5	Intersection,Union,Compound Inequality	1, 5, 13, 17, 21, 29, 41, 45, 47, 51, 59, 61	
1.6	Absolute-Value Equations, Inequalities	1, 5, 11, 15, 21, 31, 35, 37, 43, 51, 53, 57, 59, 63, 67	
2.1	Graphs of Equations	1, 5, 15, 17, 25, 31, 33, 41, 45, 47, 49, 51	Asst 2 due Sep 25 Test 2 Sep 30
2.2	Functions and Graphs	1, 5, 7, 9, 19, 21, 23, 27, 35, 43, 47, 49, 53, 55, 57, 59, 61	
2.3	Finding Domain and Range	1, 5, 7, 9, 11, 15, 19, 23, 27, 33, 37	
2.4	Linear Functions: Graphs and Slope	1, 5, 9, 13, 19, 19, 23, 27, 31, 33	
2.5	More on Graphing Linear Equations	1, 5, 9, 13, 17, 19, 23, 29, 31, 39, 43, 45, 51, 55, 71, 75, 77	
2.6	Finding Equations of Lines: Applications	1, 5, 9, 11, 19, 25, 29, 31, 33, 41, 45, 51	
3.1	Systems of Equations in Two Variables	3, 5, 13, 15, 17, 19 (omit consistency and dependence part)	
3.2	Solving by Substitution	1, 7, 11, 15, 17, 19, 21	
3.3	Solving by Elimination	3, 5, 9, 11, 15, 17, 27, 31	
3.4a	Solving Applied Problems	1, 5, 7, 9, 13, 17, 19	
3.7ab	Systems of Inequalities in Two Variables	1, 5, 11, 13, 17, 19, 21	
4.1	Intro to Polynomials	1, 5, 7, 21, 25, 29, 35, 41, 51, 55, 67, 73, 79	Asst 3 due Oct 23 Test 3 Oct 28
4.2	Multiplication of Polynomials	1, 5, 11, 13, 15, 21, 23, 27, 33, 41, 51, 55, 65, 71, 77, 81, 85, 91	
4.3	Introduction to Factoring	1, 5, 9, 11, 17, 21, 25, 29, 33, 37, 43, 47, 49	
4.4	Factoring Trinomials: x^2+bx+c	1, 5, 7, 11, 13, 19, 21, 23, 25, 27, 29, 33	
4.5	Factoring Trinomials: ax^2+bx+c	1, 5, 9, 19, 25, 29, 33, 41, 45, 51	
4.6	Special Factoring	1,5,11,17,25,33,35,39,43,47,53,61,63,69,71,75,79,89,95	
4.7	Factoring: A General Strategy	1,3,5,7,11,17,19,23,25,29,31,35,43,49,51	
4.8	Applications Polynomial Equations	1, 5, 9, 13, 17, 21, 29, 33, 37, 39, 41, 47, 51, 53, 55, 63, 65, 69, 71, 73,75, 77	
5.1	Rational Expressions,Functions: Mult./Div.	1, 3, 5, 7, 13, 15, 19, 21, 25, 27, 29, 31, 35, 37, 41, 45, 49, 51, 55, 57	
5.2	LCMs, LCDs, Addition and Subtraction	3, 11, 13, 19, 23, 27, 31, 33, 35, 39, 45, 49, 55, 63, 67, 71	
5.3	Division of Polynomials	1, 5, 9, 11, 15, 19, 21, 23, 29, 31, 33	
5.4	Complex Rational Expressions	1, 5, 9, 13, 17, 19, 21, 23, 27, 29, 31	
5.5	Solving Rational Equations	1, 5, 9, 11, 15, 19, 23, 25, 27, 33, 35, 41, 43	
5.6	Uniform Motion Applications	25, 27, 29	
5.7	Formulas and Applications	1-23 odd	
5.8	Variation and Applications	1, 5, 7, 9, 15, 17, 21, 25, 29, 31, 39, 41	

R.3	Exponential Notation and Order of Operations	1, 5, 13, 15, 25, 29, 31, 33, 35, 37, 41, 45, 55, 59, 67, 85, 97, 105, 107	Asst 4 due Nov 13 Test 4 Nov 18
R.7	Properties of Exponents and Scientific Notation	1, 5, 9, 13, 17, 21, 25, 29, 37, 41, 49, 53, 57, 61, 69, 71, 79, 81, 87, 89, 93, 97, 103, 105	
6.1	Radical Expressions and Functions	7, 9, 11, 13, 15, 19, 23, 25, 27, 29, 35, 43, 45, 51, 53, 61, 63, 65, 67, 69, 71	
6.2	Rational Numbers as Exponents	3, 7,15, 21, 29, 33, 39, 41, 43, 45, 49, 51, 53, 55, 59, 63, 69, 71, 73, 75, 79	
6.3	Simplifying Radical Expressions	1,5, 9, 13, 17, 21, 25, 29, 33, 39, 41, 49, 53, 55, 59, 67, 71, 75,79, 83, 87, 89	
6.4	Addition, Subtraction, and More Multiplication	1, 5, 9, 13, 17, 19, 23, 33, 37, 43, 47, 51, 57, 61, 67, 71, 73	
6.5	More on Division of Radical Expressions	1, 5, 9, 13, 17, 21, 25, 29, 31, 34	
6.6	Solving Radical Equations	1, 5, 9, 17, 19, 21, 27, 29, 33, 37, 41, 47, 53, 55, 57	
6.7	Applications Involving Powers and Roots	1, 5, 7, 11, 13, 17, 19, 21, 23, 29	
6.8	The Complex Numbers	1, 5, 13, 17, 19, 27, 31, 35, 39, 47, 71, 77, 81, 87	
7.1	Basics of Solving Quadratic Equations	1, 5, 9, 13, 17, 21, 25, 33, 39, 43, 47, 49, 51, 55, 57	
7.2	The Quadratic Formula	1, 3, 11, 17, 21, 29, 33, 35, 41	
7.3	Applications Involving Quadratic Equations	3, 5, 9, 11, 13, 19, 21, 25, 31, 35, 37, 39, 41, 43, 47	
7.4	More on Quadratic Equations	1, 5, 9, 15, 17, 21, 23, 29, 31, 33, 35, 37, 39, 43, 47, 49, 55	
7.5	Graphing $f(x) = a(x-h)^2 + k$	1, 5, 9, 13, 17, 19, 21, 23	Asst 5 due Nov 27 Test 5 Dec 3
7.6	Graphing $f(x) = ax^2 + bx + c$	1, 5, 7, 9, 15, 19, 21	
7.7	Mathematical Modeling with Quadratic Functions	1,3,7	
	Text: Trigonometry Supplement		
5.1 Trig	Trig functions of Acute Angles	1-29 odd, 37, 49, 55, 61, 69, 71, 79-91 odd, 97	
5.2 Trig	Applications of Right Triangles	1, 3, 9, 13, 15, 17, 21, 27, 29, 31	
5.3 Trig	Trig Functions of Any Angles	15,9,13,15,19,2325,29,39, 41,45,47,51,61,75, 83, 87, 93, 97	
7.1 Trig	The Law of Sines	1, 3, 5, 9, 13, 15, 17, 21, 25, 27	
7.2 Trig	The Law of Cosines	1, 3, 7, 9, 13, 17, 19, 21, 25, 31	

6. Pacing Schedule (tentative)

Wk		Monday	Tuesday	Wednesday	Thursday	Friday
1	Sep 1-5	Holiday	R.1,R.2,R.3 (Order of Operations),R.5	1.1	R.4 ,1.2, 1.3	
2	Sep 8-12	1.3,1.4	1.5, 1.6	2.1	2.2, 2.3 *Asst #1 due*	
3	Sep 15-19	2.4,2.5	**Test #1** (R.1-R.2,R.4-R.6, 1.1-1.6) Fee deadline	2.6	3.1,3.2	
4	Sep 22-26	3.3, Comparing Methods	3.4a ,3.7ab	4.1,4.2	4.3,4.4 *Asst #2 due*	
5	Sep 29-Oct 3	4.5	**Test #2** (2.1-2.6, 3.1-3.3,3.4a,3.7ab)	4.6	4.7, 4.8	
6	Oct 6-10	5.1	5.2	*5.3*	5.4	
7	Oct 13-17	HOLIDAY	5.5	5.6	5.7, 5.8	
8	Oct 20-24	Exponent Review R.3, R.7, 6.1	6.2	6.3	6.4 *Asst #3 due*	
9	Oct 27-31	6.5	**Test #3** (4.1-4.8, 5.1-5.8)	6.6	6.7	
10	Nov 3-7	6.8 Withdrawal deadline	7.1	7.2	7.3	
11	Nov 10-14	7.4	Remembrance Day	7.5	7.6 *Asst #4 due*	
12	Nov 17-21	7.7	**Test #4** (R.3, R.7,6.1-6.7, 7.1-7.4)	5.1*	5.2*	
13	Nov 24-28	5.2*	5.3*	7.1*	7.2* *Asst #4 due*	
14	Dec 1-5	Trig exercise	Review	**Test #5** (7.5-7.7, Trig)	Exam Review	
Final exam period: Dec 8-13, 15,16						