



Mathematics 137 001
Algebra and Triangle Trigonometry
Spring 2014

Instructor: Gemma Cuizon
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Schedule:

Time	Monday	Tuesday	Wednesday	Thursday	Friday
10:30 am-10:55 am				Office Hours E250	Office Hours E250
11:00 am-11:30 am	Office Hours E250	Office Hours E250	Office Hours E250	Math 137_001 E348	Math 137_001 E348
11:30 pm - 2:20 pm	Math 137_001 E348	Math 137_001 E348	Math 137_001 E348	Math 137_001 E348	Math 137_001 E348
4:45 pm - 5:30 pm	Office Hours E250		Office Hours E250		
6:00 pm - 7:50 pm	Math 072/073 S01 E348		Math 072/073 S01 E348		

Important Dates:

May 5	First day of Math 137 class
May 12	Fee deadline
May 19	Victoria Day – College closed
June 5	Last day to withdraw from the course or change to audit
June 21	Last day of instruction of Math 137 class
June 23 – 25	Final Examination period

Prerequisites: “C” in Principles of Math 10 or Foundations of Math 11 or “B” in Applications of Math 11 or “C-“ in Principles of Math 11 or Pre-calculus or “C” in Applications of Math 12 or “C” in Math 053 or Math 057 or assessment.

Exit Grade: You need a grade of B (73%) or better in 137 to continue into Math 115 and a C+(65%) to continue into Math 107 and Math 109 and a C(60%) to continue into Math 112.

Required Textbook: *Intermediate Algebra, 11th Edition, Marvin Bittinger*
 In the bookstore, new textbooks come packaged with the Student’s Solution Manual and a Trigonometry booklet..

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)

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.**

Calendar Description: This course provides a foundation for the further study of mathematics. Topics include: linear equations; polynomial, rational and radical expressions and equations; quadratic functions and equations; and triangle trigonometry including Sine and Cosine Laws. [5 credits]
(Source: [Camosun College Calendar](http://camosun.ca/learn/calendar/current/web/math.html))
<http://camosun.ca/learn/calendar/current/web/math.html>

Basis of Student Assessment (Grading)

Assignments: There are 5 assignments which are based on questions from your textbook. **Submit your homework assignments in a duo-tang or file folder with your name on it.**

Assignments are due by 7:30pm on the designated day (see pacing schedule). 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 test marks will be dropped when calculating the 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+

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 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 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 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 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 Chap 3&4			

Learning Support

There are a variety of services available for to assist you throughout your learning. This information is available in the College calendar, at Student Services or the college web site at camosun.ca.

Student Conduct

There is a Student Conduct Policy which includes plagiarism. It is your responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services and on the College web site in the Policy Section www.camosun.bc.ca/policies/policies.html.

Math 137 Lectures (3 hrs) [Spring 2014]

1	May 5 R.1, R.2, R.3	May 6 R.3, R.4, R.5	May 7 R.5, R.6, R.7	May 8 R.7, 1.1, 1.2	May 9 Assign. R due 1.3, 1.4, 1.5
2	May 12 1.5, 1.6 Review(R.1-R.7)	May 13 Unit 1 Test 1.6, 2.1	May 14 2.1, 2.2, 2.3	May 15 2.4, 2.5, 2.6	May 16 Assign. 2 due 3.1, 3.2, 3.3
3	May 19 Victoria Day College Closed	May 20 3.4a, 3.7ab Review(Ch.1&2)	May 21 Unit Test 2 3.7ab, 4.1	May 22 4.2, 4.3, 4.4	May 23 4.4, 4.5, 4.6
4	May 26 4.7, 4.8, 5.1	May 27 Assign. 3 due 5.1, 5.2, 5.3	May 28 5.3, 5.4 Review(Ch.3&4)	May 29 Unit 3 Test 5.4, 5.5, 5.6	May 30 5.6, 5.7, 5.8
5	June 2 5.8, 6.1, 6.2	June 3 6.2, 6.3, 6.4	June 4 6.4, 6.5, 6.6	June 5 6.6, 6.7, 6.8	June 6 Assign. 4 due 7.1, 7.2, 7.3
6	June 9 7.3, 7.4 Review(Ch.5&6)	June 10 Unit 4 Test 7.4, 7.5	June 11 7.5, 7.6, 7.7	June 12 7.7 Trig. 5.1 Trig. 5.2	June 13 Trig. 5.2 Trig. 5.3
7	June 16 Trig. 5.3 Trig. 7.1 Trig. 7.2	June 17 Trig. 7.2 Assign. 5 due Review (Ch. 7 & Trig.)	June 18 Review (Ch. 7 & Trig.)	June 19 Unit 5 Test	June 20 Final Exam Review
8	June 23 Final Exam Period	June 24 Final Exam Period	June 25 Final Exam Period	June 27	June 28

Recommended Homework and Assignments

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

Assignment	Sec.	Recommended Practice Problems (not to be handed in)
Assignment R Due: May 9	R.1	3, 11, 15, 17, 23, 33, 39, 41, 45, 49, 51, 59, 63
	R.2	5, 15, 23, 51, 53, 71, 75, 77, 87, 89, 95, 103, 109, 113
	R.3	1, 5, 13, 15, 25, 29, 31, 33, 35, 37, 41, 45, 55, 59, 67, 85, 97, 105, 107
	R.4	1, 3, 13, 15, 17, 23, 25, 31, 35, 37, 41, 45
	R.5	1, 7, 11, 19, 21, 25, 31, 35, 37, 41, 45, 47, 53, 59
	R.6	11, 15, 21, 23, 27, 35, 41, 43, 47, 53, 57, 67
	R.7	1, 5, 9, 13, 17, 21, 25, 29, 37, 41, 49, 53, 57, 61, 69, 71, 79, 81, 87, 89, 93, 97, 103, 105
Assignment 2 Due: May 16	1.1	9, 11, 23, 35, 37, 43, 47, 51, 55, 59, 61, 63, 69, 73, 77, 79
	1.2	1, 5, 9, 13, 17, 19, 21, 23, 27, 29, 37
	1.3	1, 5, 7, 9, 13, 15, 21, 23
	1.4	3, 5, 7, 9, 11, 13, 17, 27, 35, 37, 41, 43, 47, 55, 59, 63, 71, 73, 77, 85
	1.5	1, 5, 13, 17, 21, 29, 41, 45, 47, 51, 59, 61
	1.6	1, 5, 11, 15, 21, 31, 35, 37, 43, 51, 53, 57, 59, 63, 67
	2.1	1, 5, 15, 17, 25, 31, 33, 41, 45, 47, 49, 51
	2.2	1, 5, 7, 9, 19, 21, 23, 27, 35, 43, 47, 49, 53, 55, 57, 59, 61
	2.3	1, 5, 7, 9, 11, 15, 19, 23, 27, 33, 37
	2.4	1, 5, 9, 13, 19, 19, 23, 27, 31, 33
	2.5	1, 5, 9, 13, 17, 19, 23, 29, 31, 39, 43, 45, 51, 55, 71, 75, 77
2.6	1, 5, 9, 11, 19, 25, 29, 31, 33, 41, 45, 51	
Assignment 3 Due: May 27	3.1	3, 5, 13, 15, 17, 19 (omit consistency and dependence part)
	3.2	1, 7, 11, 15, 17, 19, 21
	3.3	3, 5, 9, 11, 15, 17, 27, 31
	3.4a	1, 5, 7, 9, 13, 17, 19
	3.7ab	1, 5, 11, 13, 17, 19, 21
	4.1	1, 5, 7, 21, 25, 29, 35, 41, 51, 55, 67, 73, 79
	4.2	1, 5, 11, 13, 15, 21, 23, 27, 33, 41, 51, 55, 65, 71, 77, 81, 85, 91
	4.3	1, 5, 9, 11, 17, 21, 25, 29, 33, 37, 43, 47, 49
	4.4	1, 5, 7, 11, 13, 19, 21, 23, 25, 27, 29, 33
	4.5	1, 5, 9, 19, 25, 29, 33, 41, 45, 51
	4.6	1,5,11,17,25,33,35,39,43,47,53,61,63,69,71,75,79,89,95
4.7	1,3,5,7,11,17,19,23,25,29,31,35,43,49,51	
4.8	1, 5, 9, 13, 17, 21, 29, 33, 37, 39, 41, 47, 51, 53, 55, 63, 65, 69, 71, 73,75, 77	
Assignment 4 Due: June 6	5.1	1, 3, 5, 7, 13, 15, 19, 21, 25, 27, 29, 31, 35, 37, 41, 45, 49, 51, 55, 57
	5.2	3, 11, 13, 19, 23, 27, 31, 33, 35, 39, 45, 49, 55, 63, 67, 71
	5.3	1, 5, 9, 11, 15, 19, 21, 23, 29, 31, 33
	5.4	1, 5, 9, 13, 17, 19, 21, 23, 27, 29, 31
	5.5	1, 5, 9, 11, 15, 19, 23, 25, 27, 33, 35, 41, 43
	1.3(b)	27, 29
	3.4(b)	21, 23, 28, 29, 31
	5.6	25, 27, 29
	5.7	1-23 odd
	5.8	1, 5, 7, 9, 15, 17, 21, 25, 29, 31, 39, 41
	6.1	7, 9, 11, 13, 15, 19, 23, 25, 27, 29, 35, 43, 45, 51, 53, 61, 63, 65, 67, 69, 71
	6.2	3, 7,15, 21, 29, 33, 39, 41, 43, 45, 49, 51, 53, 55, 59, 63, 69, 71, 73, 75, 79

	6.3	1,5, 9, 13, 17, 21, 25, 29, 33, 39, 41, 49, 53, 55, 59, 67, 71, 75,79, 83, 87, 89
	6.4	1, 5, 9, 13, 17, 19, 23, 33, 37, 43, 47, 51, 57, 61, 67, 71, 73
	6.5	1, 5, 9, 13, 17, 21, 25, 29, 31, 34
	6.6	1, 5, 9, 17, 19, 21, 27, 29, 33, 37, 41, 47, 53, 55, 57
	6.7	1, 5, 7, 11, 13, 17, 19, 21, 23, 29
	6.8	1, 5, 13, 17, 19, 27, 31, 35, 39, 47, 71, 77, 81, 87
Assignment 5 Due: June 17	7.1	1, 5, 9, 13, 17, 21, 25, 33, 39, 43, 47, 49, 51, 55, 57
	7.2	1, 3, 11, 17, 21, 29, 33, 35, 41
	7.3	3, 5, 9, 11, 13, 19, 21, 25, 31, 35, 37, 39, 41, 43, 47
	7.4	1, 5, 9, 15, 17, 21, 23, 29, 31, 33, 35, 37, 39, 43, 47, 49, 55
	7.5	1, 5, 9, 13, 17, 19, 21, 23
	7.6	1, 5, 7, 9, 15, 19, 21
	7.7	1,3,7
	5.1s*	1-29 odd, 37, 49, 55, 61, 69, 71, 79-91 odd, 97
	5.2s*	1, 3, 9, 13, 15, 17, 21, 27, 29, 31
	5.3s*	15,9,13,15,19,23,25,29,39, 41,45,47,51,61,75, 83, 87, 93, 97
	7.1s*	1, 3, 5, 9, 13, 15, 17, 21, 25, 27
	7.2s*	1, 3, 7, 9, 13, 17, 19, 21, 25, 31