

# Mathematics 137-003 Algebra and Triangle Trigonometry Winter, 2016

Instructor: Cathy Frost Lansdowne Office: Ewing 250 Ph#:250-370-3404

E-mail: frost@camosun.bc.ca

**Websites:** <a href="http://online.camosun.ca">http://online.camosun.ca</a> for all course materials and grades

http://pearsonmylabandmastering.com for online quizzes

#### Timetable:

Time Monday		Wed	Thursday	Friday	
	Math 137-001 E346	Math 137-001 E346	Math 137-001 E346	Math 137-001 E346	
	Office Hour	Office Hour	Office Hour		
	Office Hour	Office Hour	Office Hour		
Math 137-003 E346	Math 137-03 E346	Math 137-003 E346	Math 137-003 E346		
	Math 137-003	Math 137-001 E346  Office Hour  Office Hour  Math 137-003  Math 137-03	Math 137-001 E346  Office Hour  Office Hour  Office Hour  Math 137-003  Math 137-003  Math 137-003	Math 137-001 Math 137-001 E346 E346  Office Hour Office Hour Office Hour  Office Hour Office Hour Office Hour  Math 137-003 Math 137-003 Math 137-003	

**Important Dates:** Jan 11 First day of classes

Jan 25 Fee Deadline
Feb 8 Family Day Holiday
Feb 18-19 Reading Break
Mar 14 Withdrawal Deadline

Mar 25, Mar 28 Good Friday and Easter Monday Holidays

Apr 15 Last day of classes for Fall term

Apr 18-23, 25, 26 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 <a href="http://camosun.ca/learn/calendar/current/web/math.html">http://camosun.ca/learn/calendar/current/web/math.html</a>

# 2. Course Materials and Support Required Materials:

#### Required materials:

- a) M.L. Bittinger, *Intermediate Algebra*, 12<sup>th</sup> Edition, Addison-Wesley, Boston, 2015 with Student Solution Manual and MyMathLab access code. Available in text or e-text (buy the code at bookstore).
- b) Sharp EL-531W scientific calculator this is the only calculator allowed on tests and the exam.
- c) Math 137 Course Pack, Frost

# **Supplementary Materials:**

- a) A Trig supplement is available on my website. You do not need to purchase one.
- b) Videotapes and CD's covering each section of the text in the library viewing room (free-3 day loan)

**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 bhttp://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:** 

Online assignments are taken through MyMathLab. The assignments must be completed by the deadline dates and are due on Mondays by 11:59pm. However, it is best to complete them well before then to allow for any glitches such as frozen computers, or power outages. There are no extensions. See the attached handout on how to register for MyMathLab. There is one in class assignment.

Tests:

There are 4 in class tests. The dates and topics are on the pacing schedule. If you miss a test for any reason (including illness, getting called into work) a zero will be assigned, unless you contact me via e-mail <u>before</u> the test to make alternate arrangements. All tests count.

**Grade Calculation:** 

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

Assignments 10% 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	С	C+	B-	В	B+	<b>A</b> -	Α	A+

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

# **Academic Integrity:**

The Department of Mathematics and Statistics has prepared a 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.

# **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  $\frac{\text{http://camosun.ca/about/policies/education-academic/e-1-programming-\&-instruction/e-1.1.pdf}$ 

# 5. Course Content

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

# 6. Pacing Schedule

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Wk		Monday	Tuesday	Wednesday	Thursday	Friday
1	Jan 11-15	Review	Review 1.1	1.2	1.3	
2	Jan 18-22	1.4/1.5 Quiz Chap R	1.6	2.1	2.2/2.3	
3	Jan 25-29	2.4/2.5 Quiz Chap 1	2.6	3.1/3.2	3.3	
4	Feb 1-5 3.4a/3.7ab Quiz Chap 2		4.1/4.2	Test 1 (Chaps R, 1&2)	4.3/4.4	
5	Feb 8-12	Holiday	4.5 Quiz Chap 3	4.6	4.7	
6	Feb 15-19	4.8	5.1	5.2	Reading Break	
7	Feb 22-26	5.3 Quiz Chap 4	5.4	<b>Test 2</b> (Chaps 3&4)	5.5	
8	Feb 29-Mar 4	5.6	5.7/5 .8	R.3/R.7 6.1	6.2	
9	Mar 7-11	6.3 Quiz Chap 5	6.4	6.5	6.6	
10	Mar 14-18	6.7	6.8	Test 3 Chap 5, Chap 6.1-6.4	7.1	
11	Mar 21-25	7.2 Quiz Chap 6	7.3	7.4	7.5	
12	Mar 28-Apr 1	Holiday	7.6	7.6	7.7	
13	Apr 4-8 Trig Quiz Chap 7		Trig	Test 4 Chap 6.5-6.8 Chap 7	Trig	
14	Apr 11-15	Trig In Class Asst	Trig In Class Asst	Review	Review	
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Final exam period: Apr 18-23,25,26



#### Welcome Students!

MyMathLab is an interactive website where you can:

- · Access the full Etext
- Work through instructor- recommended homework, self-test and do practice exercises with step-by-step help to improve
  your math skills.
- Study more efficiently with a personalized study plan and exercises that match your book.
- Get help when YOU need it. MyMathLab includes multimedia learning aids, videos, animations, and live tutorial help.

MyMathLab is where you will take your quizzes.

## **Before You Begin:**

To register for MyMathLab, you need:

- ✓ A MyMathLab student access code
- **☑** Your instructors' Course ID: frost47954
- **☑** A valid email address

# **Student Registration:**

- Enter www.mymathlab.com in your web browser.
- Click on Register on the top right hand of the screen.
- Under Register, click Student. Then OK! Register Now.
- Enter your Course ID: frost01773 and click Continue. Your course information appears on the next page. If it does not look correct, contact your instructor to verify the Course ID.
- Sign in or follow the instructions to create an account. Use an email address that you check and, if possible, use that same email address for your username. Read and accept the License Agreement and Privacy Policy.
- Click Access Code. Enter your Access Code in the boxes and click Next. If you do not have an access code you can buy it at the bookstore(cheaper than using PayPal). You can get 14 days of free temporary access (Look for a link near the bottom of the page) to start the program now so you don't miss any quizzes.

Once your registration is complete, a **Confirmation** page appears. You will also receive this information by email. Make sure you print the Confirmation page as your receipt. Remember to **write down your username and password**. You are now ready to access your resources!

## Signing In:

- Go to www.mymathlab.com and click **Sign in**.
- Enter your username and password and click Sign In.
- On the left, click the name of your course.

The first time you enter your course from your own computer and anytime you use a new computer, click the **Installation Wizard** or **Browser Check** on the Announcements page. After completing the installation process and closing the wizard, you will be on your course home page and ready to explore your MyMathLab resources!

#### Need help?

Contact Product Support at http://www.mymathlab.com/student-support for live CHAT, email, or phone support.