

### Mathematics 137-002 Algebra and Triangle Trigonometry Fall, 2015

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Websites: <u>http://online.camosun.ca</u> for all course materials and grades <u>http://pearsonmylabandmastering.com</u> for online quizzes

#### Timetable:

Time	Monday	Tuesday	Wed	Thursday	Friday
11:00am- 12:50pm			Math 135-002 CC121 (IU)		Math 135-002 CC121 (IU)
1:00-1:50pm			Office Hour (Interurban CBA 156)		Office Hour (Interurban CBA 156)
2:00-2:50pm		Office Hour E250			
3:00-4:50pm	Math 137-002 E346	Math 137-002 E346	Math 137-002 E346	Math 137-002 E346	
5:00-5:50pm	Office Hour E250		Office Hour E250		
6:00-7:50pm	Math 135-003 E346		Math 135-003 E346		

Additional Office Hours by Appointment

#### Important Dates:

Sep 8	First day of classes
Sep 22	Fee Deadline
Oct 12	Holiday
Nov 9	Withdrawal Deadline
Nov 11	Holiday
Dec 11	Last day of classes for Fall term
Dec 14-19, 21, 22	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:**

- 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) Videotapes and CD's covering each section of the text in the library viewing room (free-3 day loan)
- b) Trigonometry Supplement (at bookstore, not needed for my section)

**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 <u>http://camosun.ca/services/help-centres/math-access.html</u>

#### 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 Applicatio

"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)

Quizzes:	Quizzes are taken online through MyMathLab. It is highly recommended that you do the online homework (also provided in a handout if you are working from a textbook to prepare you for the quiz. The online quiz must be completed by Sun @ 11:59pm of the week that it's assigned, however, it is best to complete it 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.									
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, getting called into work, etc.) 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:Quizzes10%Tests40%Comprehensive Final Exam:50%									
Grade Scale:			60.64	65.60	10 10	70.70			05.00	
	0-49	50-59	60-64	65-69	/0-/2	/3-/6	//-/9	80-84	85-89	90-100
	For inform http://car 1.5.pdf	nation on mosun.ca	Camosu /about/p	n College olicies/ec	's grading ucation-a	g policy, academic	see the v c/e-1-pro	vebpage grammin	g-&-instr	uction/e-
Academic Integrity:	The Department of Mathematics and Statistics has prepared a handout called <i>Student Guidelines for Academic Integrity</i> 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.									

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 <a href="http://camosun.ca/about/policies/education-academic/e-1-programming-&-instruction/e-1.1.pdf">http://camosun.ca/about/policies/education-academic/e-1-programming-&-instruction/e-1.1.pdf</a>

#### 5. Course Content

Review of Basic Algebra	<b>Rational Expressions, Equations, and Functions</b>				
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 Inequalities	6.6 Solving Radical Equations				
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					
4.3 Introduction to Eactoring					
4.4 Factoring Trinomials: $x^2 + bx + c$					
4.5 Factoring Trinomials: $ax^2 + bx + c$					
4.6 Special Factoring					
4./ Factoring: A General Strategy					
4.8 Applications of Polynomial Equations					

## 6. Pacing Schedule

Wk		Monday	Tuesday	Wednesday	Thursday	MyMathLab Due Sun. @ 11:59pm	
1	Sept 7-11	HOLIDAY	Intro, Algebra Review	Algebra Review, Trig	Trig	Quiz #1 (Review)	
2	Sept 14-18	Trig	Trig	1.1 Trig Activity	1.2, 1.3 Trig Activity	Quiz #2 (Trig)	
3	Sept 21-25	1.4	<b>Test #1</b> (Trig) 1.5 Fee deadline	1.6	2.1	Quiz #3 (Chap 1)	
4	Sept 28-Oct 2	2.2,2.3	2.4, 2.5	2.6	3.1,3.2	Quiz #4 (Chap 2)	
5	Oct 5-9	3.3, 3.4a	<b>Test #2</b> (1.1-2.6) 3.7ab	4.1,4.2	4.3,4.4	Quiz #5 (Chap 3)	
6	Oct 12-16	HOLIDAY	4.5	4.6	4.7	No quiz	
7	Oct 19-23	4.7	4.8	5.1	5.2	Quiz #6 (Chap 4)	
8	Oct 26-30	5.3	<b>Test #3</b> (3.1-4.8)	5.4	5.5	No quiz	
9	Nov 2-6	5.6	5.7, 5.8	Exponent Review R.3, R.7, 6.1	6.2	Quiz #7 (Chap 5)	
10	Nov 9-13	6.3 Withdrawal deadline	6.4	HOLIDAY	6.5	No quiz	
11	Nov 16-20	6.6	6.7	6.8	7.1	Quiz #8 (Chap 6)	
12	Nov 23-27	7.2	<b>Test #4</b> (R.3, R.7,5.1-6.8)	7.3	7.4	No quiz	
13	Nov 30-Dec 4	7.4	7.5	7.6	7.6	Quiz #9 (Chap7)	
14	Dec 7-11	7.7	Review	Test #5 (7.1-7.7)	Exam Review	No quiz	
Final exam period: Dec 14-19, 21,22							

# **MyMathLab**

#### 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: frost01773
- ☑ A valid email address

#### **Student Registration:**

- Enter <u>www.mymathlab.com</u> 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 <u>www.mymathlab.com</u> 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.