



Mathematics 137-001 Algebra and Triangle Trigonometry Winter, 2017

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Websites: <http://online.camosun.ca> - course materials/grades <http://pearsonmylabandmastering.com> - online assts

Timetable:

| Time | Monday | Tuesday | Wed | Thursday | Friday |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|
| 12:30am-2:20pm | Math 137-001 E346 | | Math 137-001 E346 | Math 137-001 E346 | Math 137-001 E346 |
| 2:30-3:20pm | Office Hour | Office Hour | Office Hour | Office Hour | |
| 3:30-5:20pm | Math 137-003 E346 | Math 137-003 E346 | Math 137-003 E346 | Math 137-003 E346 | |
| Additional Office Hours by Appointment | | | | | |

Important Dates:

| | |
|-----------------|------------------------------|
| Jan 9 | First day of classes |
| Jan 23 | Fee Deadline |
| Feb 13-17 | Family Day and Reading Break |
| Mar 13 | Withdrawal Deadline |
| Apr 13 | Last day of classes |
| Apr 18-22,24-26 | 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 <http://camosun.ca/learn/calendar/current/web/math.html>

2. Course Materials and Support

Required Materials:

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

Supplementary Materials:

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

Study Tips: We recommend you spend 8-12 hours per week studying outside of class time.

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.

4. Basis of Student Assessment (Grading)

Assignments: Online assignments are taken through MyMathLab. The deadline dates are Mondays by 11:59pm, but it is best to complete them ahead of time to allow for any glitches such as frozen computers. There are no extensions. See the last page on how to register for MyMathLab. There is also an in-class trig 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 before the test to make alternate arrangements. All tests count.

Final Exam: The final exam is worth 50% of your mark and is based on the entire course. Do not make holiday plans until you know the time of the exam as this is not negotiable.

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

| | |
|--------------------------------|-----|
| Online Assignments | 10% |
| Tests and In-Class assignments | 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 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 <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. 6 Simplifying Algebraic Expressions | 5.5 Solving Rational Equations |
| Solving Linear Equations and Inequalities | 5.6 Uniform Motion Applications |
| 1.1 Solving Equations | 5.7 Formulas and Applications |
| 1.2 Formulas and Applications | 5.8 Variation and Applications |
| 1.3 Applications and Problem Solving | Radical Expressions, Equations, and Functions |
| 1.4 Sets, Inequalities, and Interval Notation | R.3 Exponential Notation and Order of Operations |
| 1.5 Intersections, Unions, and Compound Inequalities | R. 7 Properties of Exponents and Scientific Notation |
| 1.6 Absolute-Value Equations and Inequalities | 6.1 Radical Expressions and Functions |
| Graphs, Functions, and Applications | 6.2 Rational Numbers as Exponents |
| 2.1 Graphs of Equations | 6.3 Simplifying Radical Expressions |
| 2.2 Functions and Graphs | 6.4 Addition, Subtraction, and More Multiplication |
| 2.3 Finding Domain and Range | 6.5 More on Division of Radical Expressions |
| 2.4 Linear Functions: Graphs and Slope | 6.6 Solving Radical Equations |
| 2.5 More on Graphing Linear Equations | 6.7 Applications Involving Powers and Roots |
| 2.6 Finding Equations of Lines: Applications | 6.8 The Complex Numbers |
| Systems of Equations | Quadratic Equations and Functions |
| 3.1 Systems of Equations in Two Variables | 7.1 Basics of Solving Quadratic Equations |
| 3.2 Solving by Substitution | 7.2 The Quadratic Formula |
| 3.3 Solving by Elimination | 7.3 Applications Involving Quadratic Equations |
| 3.4a Solving Applied Problems | 7.4 More on Quadratic Equations |
| 3.7ab Systems of Inequalities in Two Variables | 7.5 Graphing $f(x) = a(x-h)^2 + k$ |
| Polynomial and Polynomial Functions | 7.6 Graphing $f(x) = ax^2 + bx + c$ |
| 4.1 Introduction to Polynomials and Polynomial Functions | 7.7 Mathematical Modeling with Quadratic Functions |
| 4.2 Multiplication of Polynomials | |
| 4.3 Introduction to Factoring | Trigonometry (in class notes and online resources) |
| 4.4 Factoring Trinomials: $x^2 + bx + c$ | Trig functions of Acute Angles |
| 4.5 Factoring Trinomials: $ax^2 + bx + c$ | Applications of Right Triangles |
| 4.6 Special Factoring | Trig Functions of Any Angles |
| 4.7 Factoring: A General Strategy | The Law of Sines |
| 4.8 Applications of Polynomial Equations | The Law of Cosines |

6. Pacing Schedule

| Wk | | Monday | Tuesday | Wed | Thursday | Friday |
|-----------------------------------|----------------|--------------------------|---------|-----------------------|---------------|---------------------------------|
| 1 | Jan 9-13 | Intro/Review | | Review/1.1 | 1.2 | 1.3 |
| 2 | Jan 16-20 | 1.4/1.5 Asst Chap R | | 1.6 | 2.1 | 2.2 |
| 3 | Jan 23-27 | 2.3 Asst Chap 1 | | 2.4/2.5 | 2.6 | 3.1/3.2 |
| 4 | Jan 30-Feb3 | 3.3 Asst Chap 2 | | 3.4a/3.7ab | 4.1/4.2 | Test 1 (Chaps R, 1&2) |
| 5 | Feb 6 – Feb 10 | 4.3/4.4 Asst Chap 3 | | 4.5 | 4.6 | 4.7/4.8 |
| 6 | Feb 13-17 | Family Day Holiday | | Reading Break | Reading Break | Reading Break |
| 7 | Feb 20-24 | 5.1 Asst Chap 4 | | 5.2 | 5.3 | Test 2 (Chaps 3&4) |
| 8 | Feb 27-Mar 3 | 5.4 | | 5.5 | 5.6 | 5.7/5.8 |
| 9 | Mar 6-10 | 6.1 Asst Chap 5 | | 6.2 | 6.3 | 6.4/6.5 |
| 10 | Mar 13-17 | 6.6 Asst Chap 6.1-6.5 | | 6.7 | 6.8 | Test 3 Chap 5, |
| 11 | Mar 20-24 | 7.1 Asst Chap 6.6-6.8 | | 7.2 | 7.3 | 7.4 |
| 12 | Mar 27-Mar 31 | 7.5 | | 7.6 | 7.7 | Trig |
| 13 | Apr 3-7 | Trig Asst Chap 7 | | Trig | Trig | Test 4 Chap 6.5-6.8 |
| 14 | Apr 10-14 | Trig In Class Asst | | Trig In Class Asst | Review | Review |
| Final Exam Period Apr 18-22,23-26 | | | | | | |

MyMathLab

MyMathLab is an interactive website where you will do your assignments. You can Access the full Etext, work through assignments, self-test and do practice exercises with step-by-step help to improve your math skills. MyMathLab includes multimedia learning aids, videos, animations, and live tutorial help.

Before You Begin:

To register for MyMathLab, you need: **1) MyMathLab student access code** **2) the Course ID: frost91029**, and **3) 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: frost91029** 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 assignments.

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 at 1-866-952-8628.