



**Mathematics 137-002  
Algebra and Triangle Trigonometry  
Fall, 2018**

**Instructor:** Cathy Frost

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**Timetable:**

Time	Monday	Tuesday	Wed	Thursday	Friday
1:30-2:20pm				Office Hour	
2:30-4:20pm	Math 137-002 E348	Math 137-002 E348	Math 137-002 E348	Math 137-002 E348	
4:30-5:20pm	Office Hour	Office Hour	Office Hour	Office Hour	
5:30-7:50pm	Math 072/073 E346		Math 072/073 E346		

Additional office hours available upon request

<b>Important Academic Dates:</b>	Sep 18	Fee Deadline
	Nov 8	Withdrawal Deadline
	Dec 10-18	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>  
After completion of Math 137, students will meet the outcomes as identified in the Adult Basic Education Articulation Handbook found at

[http://www2.gov.bc.ca/assets/gov/education/post-secondary-education/adult-education/2016-17\\_abe\\_guide.pdf](http://www2.gov.bc.ca/assets/gov/education/post-secondary-education/adult-education/2016-17_abe_guide.pdf)

**2. Course Materials and Support**

**Required Materials:**

- Math 137 Course Pack (Frost)
- Math 137 Exercise Set (homework)- hard copy at the bookstore or free on my website.
- Sharp EL-531W scientific calculator – this is the only calculator allowed on tests and the exam.
- OpenSource text – free on my website. Hard copies can be printed at the Camosun print shop for a charge.

**Study Tips:** Attend all classes. It's recommended that you spend 8-12 hours per week studying outside of class at which time you can review the class notes from the day, and do the recommended odd-numbered questions in the exercise set. Get a study buddy, use the math lab, and come for extra help often and early.

**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 door or go 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/> and at the **Centre for Accessible Learning** <http://camosun.ca/services/accessible-learning/>.

**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)

**Weekly Quizzes/Assignments:** Most weeks, you'll be given a question or two from the homework to be done in class. There are no make-up quizzes, however, the best 8 will count. There are two in-class assignments. (see pacing schedule)

**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:

Assignments	10%
Tests/Trig Asst	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
<b>F</b>	<b>D</b>	<b>C</b>	<b>C+</b>	<b>B-</b>	<b>B</b>	<b>B+</b>	<b>A-</b>	<b>A</b>	<b>A+</b>

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

<p><b>2. Solving Linear Equations</b></p> <ul style="list-style-type: none"> <li>2.1. Use a General Strategy to Solve Linear Equations</li> <li>2.2. Use a Problem Solving Strategy</li> <li>2.3. Solve a Formula for a Specific Variable</li> <li>2.5. Solve Linear Inequalities</li> <li>2.6. Solve Compound Inequalities</li> <li>2.7. Solve Absolute Value Equations</li> </ul> <p><b>3. Graphs and Functions</b></p> <ul style="list-style-type: none"> <li>3.1. Graph Linear Equations in Two Variables</li> <li>3.2. Slope of a Line</li> <li>3.3. Find the Equation of a Line</li> <li>3.4. Graph Linear Inequalities in Two Variables</li> <li>3.5. Relations and Functions</li> <li>3.6. Graphs of Functions</li> </ul> <p><b>4. Systems of Linear Equations</b></p> <ul style="list-style-type: none"> <li>4.1. Solve Systems of Linear Equations with Two Variables</li> <li>4.2. Solve Applications with Systems of Equations</li> <li>4.3. Solve Mixture Applications with Systems of Equations</li> </ul> <p><b>5. Polynomials and Polynomial Functions</b></p> <ul style="list-style-type: none"> <li>5.1. Add and Subtract Polynomials</li> <li>5.2. Properties of Exponents and Scientific Notation</li> <li>5.3. Multiply Polynomials</li> <li>5.4. Dividing Polynomials</li> </ul> <p><b>6. Factoring</b></p> <ul style="list-style-type: none"> <li>6.1. Greatest Common Factor and Factor by Grouping</li> <li>6.2. Factor Trinomials</li> <li>6.3. Factor Special Products</li> <li>6.4. General Strategy for Factoring Polynomials</li> <li>6.5. Polynomial Equations</li> </ul>	<p><b>7. Rational Expressions and Functions</b></p> <ul style="list-style-type: none"> <li>7.1. Multiply and Divide Rational Expressions</li> <li>7.2. Add and Subtract Rational Expressions</li> <li>7.3. Simplify Complex Rational Expressions</li> <li>7.4. Solve Rational Equations</li> <li>7.5. Solve Applications with Rational Equations</li> </ul> <p><b>8. Roots and Radicals</b></p> <ul style="list-style-type: none"> <li>8.1. Simplify Expressions with Roots</li> <li>8.2. Simplify Radical Expressions</li> <li>8.3. Simplify Rational Exponents</li> <li>8.4. Add, Subtract, and Multiply Radical Expressions</li> <li>8.5. Divide Radical Expressions</li> <li>8.6. Solve Radical Equations</li> <li>8.7. Use Radicals in Functions</li> <li>8.8. Use the Complex Number System</li> </ul> <p><b>9. Quadratic Equations and Functions</b></p> <ul style="list-style-type: none"> <li>9.1. Solve Quadratic Equations Using the Square Root Property</li> <li>9.2. Solve Quadratic Equations by Completing the Square</li> <li>9.3. Solve Quadratic Equations Using the Quadratic Formula</li> <li>9.4. Solve Quadratic Equations in Quadratic Form</li> <li>9.5. Solve Applications of Quadratic Equations</li> <li>9.6. Graph Quadratic Functions Using Properties</li> <li>9.7. Graph Quadratic Functions Using Transformations</li> </ul> <p><b>10. Trigonometry</b></p> <ul style="list-style-type: none"> <li>Trig Functions of acute angles</li> <li>Applications of Right Triangles</li> <li>Trig Functions of Any Angles</li> <li>The Law of Sines</li> <li>The Law of Cosines</li> </ul>
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Section numbers refer to an open source text that you can Download for free at <http://cnx.org/contents/02776133-d49d-49cb-bfaa-67c7f61b25a1@4.13>.

## 6. Pacing Schedule

Wk		Monday	Tuesday	Wed	Thursday	Friday
1	Sep 3	<i>Holiday</i>	<i>Intro/Review</i>	2.1	2.2/2.3	
2	Sep 10	2.5/2.6 <b>Quiz</b>	2.7	3.1	3.2 <b>Chap 2 In Class Asst</b>	
3	Sep 17	3.3 <b>Quiz</b>	3.4/3.5 Fee deadline	3.6	4.1	
4	Sep 24	4.2/4.3 <b>Quiz</b>	5.1	5.2	<b>st 1</b> (Chaps 2&3)	
5	Oct 1	5.3 <b>Quiz</b>	5.4	6.1	6.2	
6	Oct 8	<i>Holiday</i>	6.3 <b>Quiz</b>	6.4	6.5 <b>Quiz</b>	
7	Oct 15	7.1 <b>Quiz</b>	7.2	7.3	<b>st 2</b> (Chaps 4,5&6)	
8	Oct 22	7.4 <b>Quiz</b>	7.5	7.5	8.1	
9	Oct 29	8.2 <b>Quiz</b>	8.3	8.4	8.5	
10	Nov 5	8.6 <b>Quiz</b>	8.7	8.8	<b>st 3</b> Chap 7& 8.1-8.5 <i>Withdrawal deadline</i>	
11	Nov 12	<i>Holiday</i>	9.1 <b>Quiz</b>	9.2	9.3	
12	Nov 19	9.4 <b>Quiz</b>	9.5	9.6	9.7	
13	Nov 26	Trig <b>Quiz</b>	Trig	Trig	<b>st 4</b> Chap 8.6-8.8, Chap 9	
14	Dec 3	Trig <b>Quiz</b>	Trig <b>In Class Trig Asst</b>	Trig <b>In Class Trig Asst</b>	Exam Review	
Final Exam Period Dec 10-18						