

**MAT 122 – Trigonometry, Spring Semester, 2014**  
**Sections G-11 and G-12**

**INSTRUCTOR:** Dr. Harry S. (Steve) Mills, EDBH 134K, 970-339-6238, E-mail: Use mail tool on MyAims course website. (Click on Classlist from the main Navigation bar and then click on "Mills, Harry.") Emergency e-mail: [steve.mills@aims.edu](mailto:steve.mills@aims.edu)

**IMPORTANT:** The student is responsible for reading, understanding, and complying with all [Standard Syllabus Policies](http://www.aims.edu/inside/policies/standard-syllabus/) (<http://www.aims.edu/inside/policies/standard-syllabus/>), unless otherwise stated, below.

**General:**

**Course Description:** Covers topics including trigonometric functions (with graphs and inverse functions), identities and equations, solutions of triangles, complex numbers, and other topics as time permits. This is a traditional prerequisite course to the calculus sequence. This course is a state guaranteed transfer course GT-MA1.

**General Education Competencies:** This course satisfies the following General Education competencies: Critical Thinking, Technology, and Mathematics. It also satisfies the Aims requirement for Writing. Refer to Aims Community College catalog for descriptions.

**Prerequisite(s):** REA 090, ENG 090 and MAT 121 or higher, all with grade of C or better, or assessment. Three credits.

**Required Materials:**

**Textbook:** TRIGONOMETRY  
**Author:** LARSON  
**Edition:** 9TH  
**ISBN:** 9781133954330

Wow! New at the bookstore, that's ridonkulous! You can rent from the publisher for about \$50.

**Scientific Calculator:** GRAPHING CALCULATORS ARE NOT PERMITTED ON TESTS, ALTHOUGH ELECTRONIC GRAPHING WITH ONLINE GRAPHERS OR GRAPHING CALCULATORS MAY COME UP ON THE HOMEWORK. For tests, make sure you have a scientific calculator, with which you're comfortable. Graphing calculator isn't required, but it can be handy, sometimes.

**Protractor:** We need a tool for measuring angles.

**Metric Ruler:** We need some sort of ruler.

**Course Website:** To access the website, login to <http://www.aims.edu> through the MyAims button on the upper right of the page, and click on My Courses tab. Then click on Trigonometry.

**Grades:**

Three Categories: Tests (60%), Homework (20%), Final Test (20%).

**Test Average** will count 60% of the final grade. (Replace the lowest of these with your Final Exam grade.)

**Homework** will count 20% of the final grade. This is a small fraction of the points, but the bread and butter of the course. It's where you *learn* this stuff.

**Final Test** will count 20% of the final grade. FINAL TEST IS COMPREHENSIVE! THIS MEANS IT COVERS ALL TOPICS. I like to be able to give your Final Test a little more weight, if you do well on it. The only way I can justify this is if *everything* is fair game. If your Final is *worse* than your overall average, I'll count it 20%. But it might count more, if you do well on it. I like to leave some leeway for a student to demonstrate a strong understanding of the knowledge.

**Grading Scale:** 90% - 100% A 80% - 89% B 70% - 79% C 60% - 69% D

**Stop-Out:** Students who are inactive for 2 weeks will be reported as Stop-Out and dropped from the roster.

**LEARNING OUTCOMES:**

From State of Colorado Common Course Numbering System.

1. Acquire an understanding of trigonometric vocabulary. (Reading I)
2. Measure angles in degrees and radians.
3. Calculate the values of trigonometric functions of acute angles using right triangles.
4. Evaluate trigonometric functions for general angles.
5. Use reference angles to evaluate trigonometric functions.
6. Construct the graphs of the trigonometric functions.
7. Read and interpret angular and linear velocity type problems. (Reading III, Writing II)
8. Read, interpret, and use a drawing to solve survey type problems. (Reading III, Writing II)
9. Recall and apply the reciprocal, quotient, Pythagorean, and even-odd identities to simplify expressions.
10. Use the fundamental identities to verify trigonometric identities.
11. Employ the formulas for sums and differences to find exact values of the trigonometric functions for selected angles, and to simplify expressions.
12. Derive and use the double-angle and half-angle formulas.
13. Use the product and sum formulas, and graph combinations of sine and cosine functions.
14. Describe the relationship between the trigonometric functions and their inverses. (S/L II)
15. Calculate solutions for trigonometric equations with variable side conditions.
16. Solve right triangles.
17. Use the law of sines to solve a general triangle, including the ambiguous case.

**Makeup Tests:** Documented illness and funeral obligations are the only excused absences on test days.

**Student Conduct and Civility Statement:** *Let common sense and common courtesy prevail!*

If they do *not* prevail, the student will be held to the letter and spirit of our Student Conduct Policy, which is discussed here:

<http://www.aims.edu/student/conduct/code-of-conduct?expanddiv=item1#expectations>

Again, standard syllabus information is found here:

<http://www.aims.edu/inside/policies/standard-syllabus/>