Welcome to Trigonometry! I am looking forward to getting to know each of you and we should have a lot of fun learning some interesting mathematics together. Trigonometry is one of the most applicable areas in mathematics. It is used for surveying, measurement, calculus and many other things. It has a long history. Many people have used trigonometric principles to measure inaccessible objects or objects at great distances. An understanding of this subject is essential for anyone who wishes to study the sciences, mathematics, or engineering.

To be successful in this course you must keep up. I will assign homework daily and may take it up without warning. I will also give short quizzes almost every day. You need to be prepared before each class. This math class moves very rapidly, so you cannot afford to miss a class or not do homework every night. If you are having problems with a particular problem, call or see me before class. If I did not like talking to students, I would not teach for a living. Don’t hesitate to ask questions.

There will be three in-class exams and a comprehensive final as well as numerous homework assignments and quizzes. The dates for the exams are below. In addition to this you are required to purchase a graphing calculator and the textbook. You will use both of these daily. I will be using the TI 84 plus in the classroom.

**Exams:**
- Thursday Sept. 16
- Thursday Oct. 14
- Thursday Nov. 18
- Final: Tuesday Dec. 14 10:30 – 12:30

Your grades will be determined as follows:
- Homework and Quizzes 15%
- Exams 60%
- Final Exam 25%

To be qualified to take Mathematics 117 you must have: (1) four years of high school mathematics from the pre-college curriculum, including two years of algebra and geometry (or Advanced Integrated Math 1, 2 and 3), and a) an algebra score of at least 18 on the Math Placement Exam and b) a Math ACT score of at least 22 and a GPA of at least 3.0 in high school mathematics or (2) Math 116 with a grade of C or better.
Math 117 Syllabus


Fall / Spring

Days in Session (Fall / Spring)................................. MWF...41 days / 42 days
TR......29 days / 28 days

This schedule is designed for a fall semester. The order of topics may be changed at the instructor’s discretion.

Chapter P: Prerequisites.......................................................2 days (MWF)
   Section P.3 (Other sections for review as desired by instructor) 1 days (TR)

Chapter 1: Trigonometry....................................................11 days (MWF)
   Section 1.1 Radian and Degree Measure 8 days (TR)
   1.2 Trigonometric Functions: The Unit Circle
   1.3 Right Triangle Trigonometry
   1.4 Trigonometric Functions of Any Angle
   1.5 Graphs of Sine and Cosine Functions
   1.6 Graphs of Other Trigonometric Functions
   1.7 Inverse Trigonometric Functions
   1.8 Applications and Models

Chapter 2: Analytic Trigonometry.................................11 days (MWF)
   Section 2.1 Using Fundamental Identities 8 days (TR)
   2.2 Verifying Trigonometric Identities
   2.3 Solving Trigonometric Equations
   2.4 Sum and Difference Formulas
   2.5 Multiple-Angle Formulas

Chapter 3: Additional Topics in Trigonometry.............7 days (MWF)
   Section 3.1 Law of Sines 4 days (TR)
   3.2 Law of Cosines
   3.3 Vectors in the Plane
   3.4 Vectors and Dot Products (Optional)

Chapter 4: Complex Numbers....................................3 days (MWF)
   Section 4.1 Complex Numbers (Optional) 2 days (TR)
   4.2 Complex Solutions of Equations (Optional)
   4.3 Trigonometric Form of a Complex Number
   4.4 DeMoivre’s Theorem

Chapter 6: Topics in Analytic Geometry.................3 days (MWF)
   6.6 Parametric Equations 2 days (TR)
   6.7 Polar Coordinates
   6.8 Graphs of Polar Equations

Exams / Review.................................................................4 days