TRIGONOMETRY
MATH 1330

1.0 Course Description

1.1 Overview of Content and Purpose: (3 hours) Elements of plane trigonometry, including trigonometric and circular functions, inverse trigonometric and circular solutions of triangles, identities and conditional equations, vectors, complex numbers.

1.2 Prerequisites: Satisfactory score on the Math placement exam, or MATH 1310 or MATH 1320.

2.0 Objective

3.0 Content and Organization

3.1 Topics:

1. Similar triangle ratios and applications
2. Trigonometric functions in degrees and radius, linear and angular velocity, exact values and circular functions
3. Basic trigonometric graphs and their transformations
4. Varying and using identities, including reciprocal quotient Pythagorean, sum and difference, double and half, even-odd, and product –sum and sum product
5. Inverse trigonometric functions and solving trigonometric equations
6. Law of sines, law of cosines, areas of triangles, vectors and dot product
7. Complex numbers, rectangular and polar coordinates, DeMoivre's Theorem and the nth-root theorem

4.0 Teaching Methodology

4.1 Methods to be Used: Information will be provided in a lecture format. Your instructor may also make use of Blackboard (my UNO) to offer other course documents and to post announcements, review sheets and grades.

5.0 Evaluation

5.1 Basis for Evaluating Student Performance: Comprehensive Departmental Final given during Final Exam Week. See schedule book for exam schedules for day and evening classes. The above schedule includes time for testing. The instructor determines the number of tests. However, most instructors give a minimum of four 50-minute tests, closed book and in class, plus a comprehensive final during finals week. Some instructors also give short quizzes (15 minutes) between tests. A few instructors also collect and grade assignments.

Take home tests and/or open book tests are not advisable at this level. If take-home tests to the coordinator, who maintains a test file available to all instructors who wish to consult it. No copies of tests will be given out unless the instructor who gave the test indicates it may be given out

to other instructors for use in their classes. This practice has been in effect several years, and instructors have found the file helpful.

A university rule is that no test counting 20% or more of the student's course grade may be given during the week prior to final exam week. (This rule does not apply to accelerated sections meeting less than 15 weeks.)

A university rule prohibits posting any test scores or grades without written permission form the student. Some instructors request this written permission by including a permission statement on any test for which they want to post grades. Only students who sign it have their grades posted. This also applies to tests or graded assignments you wish to return to students. Do not leave in an open pile without the student's permission.

There is a common comprehensive departmental final exam. It is a 90 minute multiple-choice exam and must count about one third of the course grade. It will be graded by Math Lab graders. You will receive a sample to use for review at the end of the course.

The standard UNO student Evaluation of Course must be given near the end of the course. See coordinator for instructions.

5.2 Grading Scale:

Each instructor determines the grading scale for the course and should inform the students of the grading procedures at the beginning of the course. Most instructors in this department use the following minimums for each grade.

A, 90%; B, 80%; C, 70%; D, 60%, F, below 60%.

There are variations in the cut-off points for A+, B+, C+, D+ grades, with some using 95%, 85%, 75%, and 65% respectively, while others use higher percents.

The Department of Mathematics/Computer Science has adopted the following policy of Credit/No Credit (CR/NC) grades. For students registered on a CR/NC basis, a performance level of C or better is required to receive a "Credit (CR)" grade. Performance at the D of F level automatically means a NC grade.

6.0 Resource Material

6.1 Textbook(s) or other required readings

Barnett, *Analytic Trig with Applications*, Wiley publishers.

Each students will need a scientific calculator for this course.