MAT 113 – College Trigonometry
Course Credit: 3 semester hours

Course Description: A study of the trigonometric functions including their properties and graphs with applications to practical problems in mathematics, physics and other areas. An emphasis is also placed on proving trigonometric identities, solving equations involving trigonometric functions, and understanding and applying theorems such as the Law of Sines and the Law of Cosines.

Rationale: A background in trigonometric topics is needed in courses such as the calculus sequence and others. For students who do not have the needed background, this course is designed to prepare them for the courses they need. It is a good elective course for students in various majors.

Prerequisites: MAT 111 or ACT MAT subscore of 21 or better

Learning Objectives: Upon successful completion of this course, the student will learn the trigonometric functions, their properties, and their graphs and how to apply them in solving problem

Instructional Procedures/Techniques: Instructional procedures include lecture, problem solving, and class discussion.

Outline of Topics:
- Angles and their measurements
- Definition of the Trig functions and their graphs
- Evaluation of Trig functions
- Trig Functions and Right Triangles
- Analytic Trigonometry involving the development of Trig identities
- Inverse Trig functions
- Applications involving the Law of Sines and Law of Cosines

Materials Required:

Text: Trigonometry (McKeague/Turner – 8th edition)
Additional Materials: Calculator

Attendance and Make-up Policies: Any student whose absences, whether excused or unexcused, accumulate to 12 in semester classes meeting 3 times per week or 8 in semester classes meeting 2 times per week or 4 in semester classes meeting once a week automatically receives a grade of F in the course. The responsibility for missed work rests entirely with the student.

Academic Integrity: Students are expected to do their own work. Refer to the following web site: www.mc.edu/publications/policies/219.html