Department: Mathematics

Course No: MATH 107Q

Title: Elementary Mathematical Modeling

Credits: 3

Contact: David Gross

WQ: Q

Catalog Copy: -MATH 107Q. Elementary Mathematical Modeling. Either semester. Three credits. Recommended preparation: MATH 101 or the equivalent. Not open to students who have passed any MATH course other than MATH 101, 102, 103, 105, or 108. This course and MATH 109 cannot both be taken for credit. This course should not be considered as adequate preparation for MATH 106, 112, 115, or 120.

Use of algebraic and trigonometric functions with technology to analyze quantitative relationships and illustrate the role of mathematics in modern life; graphical, numerical and symbolic methods. Most sections require a graphing calculator; some require work with a computer spreadsheet.

Course Information:
-a: The goals of the course remain the same. To introduce students to some of the algebra and trigonometry through a modeling, self-discovery method.

b: The course format will remain the same: typically 2 or 3 midsemester exams, quizzes and a final.

c: The topics come from the standard list of college algebra topics: functions and graphs, polynomial and rational functions, exponential and logarithm functions, trigonometry functions, applications.

Q Criteria :-The course include mathematics at or above the basic algebra level as an integral part of the course which is used throughout the course.The course included the use of basic algebraic concepts such as: formulas and functions, linear and quadratic equations and their graphs, systems of equations, polynomials, fractional expressions, exponents, powers and roots, problem solving and word problems.The course require the student to understand and carry out actual mathematical manipulations and use them in order to draw conclusions

Role of Grad Students: This course is typically taught by graduate student assistants with faculty supervision.