

Department: Mathematics

Course No: MATH 104Q

Title: Introductory College Algebra and Mathematical Modeling

Credits: 3

Contact: Sarah Glaz or David Gross

WQ: Q

Catalog Copy: -MATH 104Q. Introductory College Algebra and Mathematical Modeling

Both semesters. Three credits. Five class periods. Not open for credit to students who have passed MATH 101, or any Q course. Strongly recommended as preparation for Q courses for students whose high-school algebra needs reinforcement.

Basic algebraic notions and their manipulations, and solving multi-step problems from other disciplines. Topics include: lines, systems of equations, polynomials, rational expressions, exponential and logarithmic functions. Students will engage in group projects in mathematical modeling.

Course Information: -1a. The course is intended as a good preparation for Q courses. It emphasizes two components necessary for success in 100 level Q courses which employ mathematics. The first component consists of basic algebraic notions and their manipulations. The second component consists of the practice of solving multi-step problems from other disciplines, called mathematical modeling.

1b. There will be 3 midsemester exams plus a final exam. There will be graded weekly mathematical modeling group projects, and individual concept-practice homework sets.

Possibly quizzes, but that will depend on the individual class.

1c. The topics include: lines, systems of equations, polynomials, rational expressions, exponential and logarithmic functions. Students will engage in lively group projects in mathematical modeling.

Q Criteria : -This course will cover material at and above the basic algebra level. Indeed, in addition to teaching the algebraic concepts, it will take these concepts and use them in mathematical modeling projects which involve multi-step problems from scientific disciplines.

Role of Grad Students: -This course will be coordinated by a faculty member and taught by permanent faculty, post-doctoral fellows, graduate teaching assistants, and adjunct faculty.

Supplementary Information: -This course was approved last Spring as an experimental Q course for the 2005/2006 academic year. It is offered this academic year, both Fall and Spring semester, as the experimental course Math 195Q. Course web page:

<http://www.math.uconn.edu/~glaz/math195f05/>

Professor Glaz was awarded a 2005 Provost GEOC Course Development Grant for developing this course.