I. **Bulletin Description:** This course will incorporate functions as a central theme, beginning with linear functions and going on to rational, radical, and quadratic functions. Students will explore expressions, equations, inequalities, systems, and integer and rational exponents. Applications, graphs, and graphing calculator use are emphasized.

II. **Prerequisite:** Grade of “C” or better in MTH 099 or placement test.

III. **Rationale for Course Level:** This is the first course in the algebra sequence that qualifies for college credit.


V. **Other Requirements and/or Materials for the Course:** A graphing calculator without a Computer Algebra System (CAS) is required (e.g. TI-83 or TI-84).

VI. **Student Learning Objectives:**

   **Institutional Learning Goals:**
   - Students will demonstrate competency in reading, writing, oral communication, and numerical literacy.
   - Students will evaluate information

   **Student Learning Course Objectives**
   - Student will:
     1. Select and apply appropriate algebraic methods to solve a variety of equations, inequalities, and systems.
     2. Construct and interpret graphs of a variety of equations and inequalities, both by hand and using technology.
     3. Select and apply appropriate techniques to simplify a variety of expressions, including rational expressions, radical expressions, and expressions involving rational exponents.
     4. Apply the operations of arithmetic (addition, subtraction, multiplication, division, exponentiation, factorization) to various functions, especially polynomials.
     5. Solve real-world type problems using the problem-solving process and algebraic techniques.
VII. Suggested Course Outline:
- Review of beginning algebra: ½ week
- Introduction to functions: 1 week
- Linear functions, equations, and graphs: 1 week
- Systems of linear equations: 1 week
  Exam 1
- Rational functions, equations, and graphs: 3½ weeks
  Exam 2
- Radical functions, equations, and graphs: 4 weeks
  Exam 3
- Quadratic functions, equations, and graphs: 3 weeks
  Final Exam

VIII. Suggested Course Evaluation:
Daily or weekly homework, frequent quizzes, two or three in-class exams, and a cumulative final exam. Writing assignments and/or projects may also be used.

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IX. Bibliography:


Syllabus Prepared By:

_________________________________________
Wesley Rich, Ph.D.

_________________________________________
Date