

**SU DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
SYLLABUS (Tentative)**

MATH 100 College Algebra: A Modeling Approach

- Objective:** To develop students' problem solving skills using techniques of algebra through numeric, analytic, graphical, and symbolic approaches. Emphasis is placed on development of skills in applying algebraic techniques, critical thinking, working in teams, using graphing calculators, and communicating effectively both orally and in writing.
- Intended for:** Students other than mathematics, physics, and chemistry majors interested in improving their algebraic and problem-solving skills in preparation for taking courses in statistics or applied calculus; or for students seeking a quantitative course in general education.
- Prerequisite:** High school Algebra I and II.
- Text:** "College Algebra Through Functions and Models," by Herriott; Thomson Brooks/Cole Publishing, 2005.
- Calculator:** A TI 83+, or an equivalent graphing calculator, is required.

Topics	Weeks
<i>Review</i>	1.5
Review of algebraic fundamentals, applications	
<i>Linear Equations</i>	1.5
Linear functions & graphs, formulating and solving linear equations	
<i>Systems of Linear Equations</i>	1.5
Methods for solving systems of linear equations, applications	
<i>Functions and Models</i>	2.0
Functional notation, graphs and functions, equations and functions	
<i>Exponents & Logarithms</i>	1.5
Exponential functions, the logarithm function	
<i>Exponential and Power Functions</i>	2.0
Finding exponential relationships in data, solving exponential equations, finding power functional relationships in data	
<i>Polynomial Equations</i>	2.0
Quadratic functions, higher-order polynomial functions	
<i>Tests, Review, or Optional Topics</i>	2.0
Goodness of fit criteria, modeling with statistics and applications	

EVALUATION

Graded written assignments and quizzes	25% - 35%
Two or Three Tests	50%
Final Examination	15% - 25%

Clear descriptions of thought processes, evidence of critical thinking, and effective communication must be demonstrated in written work.

Free tutoring is available for this course in the Spring and Fall semesters.

NOTE: Once a student has received credit, including transfer credit, for a course, credit may not be received for any course with material that is equivalent to it or is a prerequisite for it.

