

**University Studies Program
Southeast Missouri State University**

**Department of Mathematics
Title of Course: College Algebra**

**Course No. MA 134
Revision: Fall 2007**

I. Catalog Description and Credit Hours of Course:

Functions and graphs, polynomial and rational functions, exponential and logarithmic functions, sequences.
3 hours

II. Prerequisites:

MA102 with grade of 'CR', MA 095 with a grade of 'C' or higher, or ACT Math subscore of 18-20 with MA 095 placement score of 14 or higher, or ACT Math subscore of 21 or higher. (University Studies course) (3)

III. Purposes or Objectives of the Course:

The course is included in the logical systems category of the University Studies program. The primary purposes of the course are to develop problem-solving capabilities requiring a logical structure and to provide the essential algebraic background for work in other fields or courses. The students will be given problems in many disciplines that use algebra in their solutions, thus giving insights into the importance of mathematical skills in almost all aspects of society. Whenever possible the historical development of a problem and its resulting solution will be discussed, and the students will be shown how continued mathematical progress is still affecting modern technology.

IV. Expectations of Students:

- A. Attend class
- B. Participate in classroom activities
- C. Provide and use a graphing calculator
- D. Do homework
- E. Pass quizzes and tests

V. Textbook: Beecher, Penna and Bittinger, (2008) *College Algebra* (3th ed.), Boston, MA: Pearson Addison Wesley

VI. Course Content: This distribution is based on 50-minute periods, and is adjusted appropriately for other formats.

Chapter	Sections	Topic	50 Minute Periods (Approximate)
1	1,2,3,4,5,6,7	Graphs, Functions and Models	8
2	3,4,5 ^{*R}	Quadratic Functions	3
3	1,2,3,4,5,6,7*	Polynomial and Rational Functions	8
4	1,2,3,4,5,6	Exponential and Logarithmic Functions	10
6	1,2,3,4*	Conics	4
7	1,2,3,7*	Sequences	4
		Review / Catch up / Optional topics	3
		Examinations	3
		Total	43

* Optional ^RReview

Students are required to use graphing calculators in this course.

VII. Basis of Student Evaluation:

- A. Student presentation of problems and homework.....10%
- B. Hour examinations.....50%
- C. Quizzes and other assessments.....20%
- D. Final examination.....20%