DEPARTMENT:  Academic Program

CURRICULUM:  Mathematics

COURSE NUMBER:  MAT 102

COURSE TITLE:  College Algebra

TYPE OF COURSE:  Academic transfer
   Special Requirement met: QSR

AREA(S) OF KNOWLEDGE:  The Natural World:  Science, Technology, and the Environment/The Language of Science; Basic Requirement - Math

COURSE LENGTH:  One quarter

CREDIT HOURS:  5

LECTURE HOURS:  55

LAB HOURS:  0

CLASS SIZE:  35 (On-line: 25)

PREREQUISITES:  MATH 098 with a 2.0 or better or appropriate placement score.

COURSE DESCRIPTION:  Algebra skills and knowledge are reinforced and further developed in preparation for Math& 141.

STUDENT LEARNING OUTCOMES ADDRESSED:
Computation
   •  Identify, Interpret, and utilize higher level mathematical and cognitive skills (for those students who choose to move beyond the minimum requirements as stated above.)

Critical thinking and Problem-Solving
   •  Think critically in evaluating information, solving problems, and making decisions.

Personal Responsibility
   •  Be motivated and able to continue learning and adapt to change.
   •  Take pride in one’s work.
GENERAL COURSE OBJECTIVES:
Upon successful completion of this course the student will be expected to:
1. Determine, evaluate, and graph functions.
2. Understand the concept of a function.
3. Recognize and graph polynomial functions and find zeros.
4. Recognize graphs of rational functions, including identifying asymptotes.
5. Understand and use exponential and logarithmic functions.
6. Solve systems of equations involving two and three variables.
7. Use course knowledge to solve a variety of applied problems.
8. Understand the definition, notation and basic techniques of determinants.

TOPOCAL OUTLINE:  
II. Functions and graphs
III. Polynomials and rational functions
IV. Exponential and logarithmic functions
V. Systems of equations and inequalities
VI. Matrices and determinants

APPROX. HOURS
55

Date: 3/16/10
Course Prefix and Number: Math 102  
Course Title: College Algebra

<table>
<thead>
<tr>
<th>SLO #</th>
<th>Included in Course Objective Number</th>
<th>SSCC Student Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLO 1.1</td>
<td></td>
<td>Communication - Read and listen actively</td>
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<tr>
<td>SLO 1.2</td>
<td></td>
<td>Communication - Speak and write effectively</td>
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<tr>
<td>SLO 2.1</td>
<td>1-8</td>
<td>Computation - Use mathematical operations</td>
</tr>
<tr>
<td>SLO 2.2</td>
<td>1-8</td>
<td>Computation - Apply quantitative skills</td>
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<tr>
<td>SLO 2.3</td>
<td>1-8</td>
<td>Computation - Identify, interpret, and utilize higher level mathematical and cognitive skills</td>
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<tr>
<td>SLO 3.1</td>
<td></td>
<td>Human Relations - Use social interactive skills to work in groups effectively</td>
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<tr>
<td>SLO 3.2</td>
<td></td>
<td>Human Relations - Recognize the diversity of cultural influences and values</td>
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<tr>
<td>SLO 4.1</td>
<td>1-8</td>
<td>Critical Thinking and Problem Solving -</td>
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<tr>
<td>SLO 5.1</td>
<td>1-8</td>
<td>Technology - Select and use appropriate technological tools</td>
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<tr>
<td>SLO 6.1</td>
<td></td>
<td>Personal Responsibility - Be motivated and able to continue learning and adapt to change</td>
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<tr>
<td>SLO 6.2</td>
<td></td>
<td>Personal Responsibility - Value one’s own skills, abilities, ideas and art</td>
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<tr>
<td>SLO 6.3</td>
<td></td>
<td>Personal Responsibility - Take pride in one’s work</td>
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<td>SLO 6.4</td>
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<td>Personal Responsibility - Manage personal health and safety</td>
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<tr>
<td>SLO 6.5</td>
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<td>Personal Responsibility - Be aware of civic and environmental issues</td>
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<tr>
<td>SLO 7.1</td>
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<td>Information Literacy - Access and evaluate information</td>
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<tr>
<td>SLO 7.2</td>
<td></td>
<td>Information Literacy - Use information to achieve personal, academic, and career goals, as well as to participate in a democratic society</td>
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</tbody>
</table>