

Planned Course: Pre-Calculus	Course Number: 308/309	Department: Math	
Unit: Analytic Geometry	Grade Level: 10-12		
Estimated Time: 50 days	Level/Track:	Date Approved: 08/20/02	
Academic Standards	Skills/Knowledge	Activities	Assessment

<p>2.8.11 Algebra and Functions</p> <p>E. Use equations to represent curves (e.g., lines, circles, ellipses, parabolas and hyperbolas).</p> <p>2.9.11 Geometry</p> <p>G. Solve problems using analytic geometry.</p>	<p>The student will be able to find the coordinates of the focus, the equation of the directrix, and the coordinates of the end points of the latus rectum and sketch and graph of the parabola given the equation of a parabola with vertex at the origin.</p> <p>The student will be able to write the equation of the parabola with vertex at the origin that satisfies the given conditions.</p> <p>The student will be able to write the equation in standard form of a parabola that satisfies the given conditions with vertex at (h, k).</p> <p>The student will be able to change the equation to standard form, give the coordinates of the vertex, the focus, the ends of the latus rectum, and sketch the parabola with vertex of (h, k).</p> <p>The student will be able to solve real world parabola</p>	<ul style="list-style-type: none"> • Chalkboard examples • Exercises in textbook • Overhead transparencies • Problems at chalkboard 	<ul style="list-style-type: none"> • Tests • Quizzes • Homework • Graded notebook • Projects/group projects
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	<p>problems.</p> <p>The student will be able to sketch the ellipse from the equation in standard form and label the center, foci, ends of the major and minor axes, and ends of each latus rectum.</p> <p>The student will be able to reduce a given equation to standard form (ellipse).</p> <p>The student will be able to write the equation in standard form of an ellipse that satisfies given conditions.</p> <p>The student will be able to solve real world ellipse problems.</p> <p>The student will be able to, given the equation in standard form, sketch the hyperbola, draw and write the equations of the asymptotes, and label the vertices, center, and foci.</p> <p>The student will be able to reduce an equation of a hyperbola to standard form</p>		
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	<p>(hyperbola).</p> <p>The student will be able to find the equation of a hyperbola that satisfies the given conditions.</p> <p>The student will be able to identify conics without completing the square or without rotation of axes.</p>		
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