**COURSE DESCRIPTION:**

**COURSE:** Algebra 2 Honors  
**FOR:** 10  
**CREDIT:** 1  
**PREREQUISITES:** Successful completion of Geometry Honors and teacher recommendation

This course continues the study of algebra and is designed particularly for the student with high interest in mathematics and a solid algebra foundation. Topics include: functions, linear and quadratic equations and inequalities, polynomial and rational functions, exponential and logarithmic functions, trigonometric functions and their applications, analytic trigonometry, analytic geometry, systems of equations and inequalities, sequences, induction, combinatorial analysis and probability. Graphing calculators are used extensively and each student is encouraged to have his/her own.

**COURSE SYLLABUS:**

**Semester I**

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review</td>
<td>Review Chapter</td>
</tr>
<tr>
<td>1</td>
<td>Equations and Inequalities: 1.1-1.7</td>
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<tr>
<td>2</td>
<td>Graphs: 2.1-2.5</td>
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<tr>
<td>3</td>
<td>Functions and Their Graphs: 3.1-3.6</td>
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<tr>
<td>4</td>
<td>Linear and Quadratic Functions: 4.1-4.5</td>
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<tr>
<td>5</td>
<td>Polynomials and Rational Functions: 5.1-5.6</td>
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<tr>
<td>6</td>
<td>Exponential and Logarithmic Functions: 6.1 – 6.3</td>
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<thead>
<tr>
<th>Chapter</th>
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<tbody>
<tr>
<td>6</td>
<td>Exponential and Logarithmic Functions: 6.4 – 6.9</td>
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<tr>
<td>7</td>
<td>Trigonometric Functions: 7.1-7.8</td>
</tr>
</tbody>
</table>
| 8       | Analytic Trigonometry: 8.1 – 8.6  
*Omit 8.7*  
9       | Applications of Trigonometric Functions: 9.1 – 9.4  
*Omit 9.5*  
*Omit Chapter 10* |
   11.5 General Form of Conic Only, Omit 11.6 and 11.7
12. Systems of Equations and Inequalities: 12.1-12.8
   Omit 12.5
13. Sequences; Induction; the Binomial Theorem: 13.1-13.5
   Omit 13.4

**KEY COMPONENTS TO TESTING OUT**
1. Name of Course: **Algebra 2 Honors**
2. Course description (above)
3. Course syllabus (above)
4. Final Requirements (check those that apply)
   - X exam
   - ___portfolio
   - ___demonstration performances
   - ___presentation
   - ___papers
   - ___projects
5. A description of the requirement(s) checked above and how it (they) will be assessed.
   
   The testing out exam will consist of 95 multiple choice questions with a value of one point each. Students need a calculator for this exam.

6. Grade calculation for attainment of C+
   
   To test out of Algebra 2 Honors, a score of at least 73/95, (77%, C+) must be attained.