

## Mathematics – High School Mathematics III

<b>Inferences and Conclusions from Data</b>	<b>Polynomials, Rational, and Radical Relationships</b>
<ul style="list-style-type: none"> <li>• Make inferences and justify conclusions from sample surveys, experiments, and observational studies. Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game).</li> </ul>	<ul style="list-style-type: none"> <li>• Derive the formula for the sum of a geometric series, and use the formula to solve problems. (e.g., Calculate mortgage payments.)</li> </ul>
<b>Trigonometry of General Triangles and Trigonometric Functions</b>	<b>Mathematical Modeling</b>
<ul style="list-style-type: none"> <li>• Apply knowledge of the Law of Sines and the Law of Cosines to determine distances in realistic situations. (e.g., Determine heights of inaccessible objects.)</li> </ul>	<ul style="list-style-type: none"> <li>• Analyze real-world situations using mathematics to understand the situation better and optimize, troubleshoot, or make an informed decision. (e.g., Estimate water and food needs in a disaster area, or use volume formulas and graphs to find an optimal size for an industrial package.)</li> </ul>