



BCS Trig/Pre-Calculus Curriculum Map

Revised June 2019

1st 9 Weeks	Chapter 4 – Trigonometric Functions	Standards
	<p>4.1 – Angles and Radian Measure All (2 Days)</p> <p>4.2 – Trigonometric Functions – The Unit Circle All (3 Days)</p> <p>4.3 – Right Triangle Trigonometry All (3 Days)</p> <p>4.4 – Trigonometric Functions of Any Angle All (3 Days)</p> <p>4.5 – Graphs of Sine and Cosine Functions All (4 Days)</p> <p>4.6 – Graphs of Other Trigonometric Functions All (4 Days)</p> <p>4.7 – Inverse Trigonometric Functions All (1 Day - Practice Exercises 1 - 30 ONLY)</p> <p>4.8 – Applications of Trigonometric Functions All (3 Days - All except Harmonic Motion)</p>	<p>M.4HSTP.23</p> <p>M.4HSTP.24</p> <p>M.4HSTP.25</p> <p>M.4HSTP.26</p> <p>M.4HSTP.29</p>

2nd 9 Weeks	Chapter 5 – Analytic Trigonometry	Standards
	<p>5.1 – Verifying Trigonometric Identities All (5 Days Practice Exercises 1 - 60)</p> <p>5.2 – Sum and Difference Formulas All (3 Days - Practice Exercises 1 - 32 and 57 - 64 ONLY)</p> <p>5.3 – Double Angle, Power Reducing, and Half Angle Formulas All (3 Days - Practice Exercises 1 - 22 and 35 - 58 ONLY)</p> <p>5.4 – Product to Sum and Sum to Product Formulas All (2 Days - Practice Exercises 1 - 22 ONLY - Skip if time is an issue)</p> <p>5.5 – Trigonometric Equations All (5 Days - Practice Exercises 1 - 116)</p>	<p>M.4HSTP.27</p> <p>M.4HSTP.28</p>



BCS Trig/Pre-Calculus Curriculum Map

Revised June 2019

2 nd 9 Weeks	Chapter 6 – Additional Topics in Trigonometry	Standards
	<p>6.1 – Law of Sines All (4 Days - Practice Exercises 1 - 60)</p> <p>6.2 – Law of Cosines All (2 Days - Practice Exercises 1 - 30 and 37 - 52)</p> <p>6.3 – Polar Coordinates (2 Days? Practice Exercises 1 - 20 and 33 - 48 ONLY)</p> <p>6.5 – Complex Numbers in Polar Form; DeMoivre’s Theorem (2 Days? Practice Exercises 1 - 36)</p> <p>6.6 – Vectors All (5 Days? Practice Exercises 1 - 52)</p> <p>6.7 – The Dot Product All (3 Days? Practice Exercises 1 - 38)</p> <p>6.4 – Graphs of Polar Equations (If time permits)</p>	<p>M.4HSTP.2</p> <p>M.4HSTP.3</p> <p>M.4HSTP.4</p> <p>M.YHSTP.5</p> <p>M.4HSTP.6</p> <p>M.4HSTP.7</p> <p>M.4HSTP.8</p> <p>M.4HSTP.9</p>

3 rd 9 Weeks	Chapter 8 – Matrices and Determinants	Standards
<p>This chapter is to be done throughout the 2nd semester via bell ringers or as additional topics as time permits.</p>	<p>8.3 – Matrix Operations and Their Applications All (3 Days - Practice Exercises 1 - 44 - Do BEFORE 8.1 and 8.2)*</p> <p>8.4 – Multiplicative Inverses of Matrices and Matrix Equations All (4 Days - Practice Exercises 1 - 42 Use Graphing Calculator for Larger Matrices - Do BEFORE 8.1 and 8.2)**</p> <p>8.5 – Determinant’s and Cramer’s Rule All (3 Days - Practice Exercises 1 - 28 by hand, 29 - 42 with Graphing Calculator - Do BEFORE 8.1 and 8.2)*</p> <p>8.1 – Matrix Solutions to Linear Systems All (3 Days - Practice Exercises 1 - 12 by hand, 21 - 38 with Graphing Calculator)**</p> <p>8.2 – Inconsistent and Dependent Systems and Their Applications All (3 Days - Practice Exercises 1 - 24 with Graphing Calculator)**</p> <p>*Definitely hit this topic. **Do if time permits</p>	<p>M.4HSTP.10</p> <p>M.4HSTP.11</p> <p>M.4HSTP.12</p> <p>M.4HSTP.13</p> <p>M.4HSTP.14</p> <p>M.4HSTP.15</p> <p>M.4HSTP.16</p> <p>M.4HSTP.17</p> <p>M.4HSTP.18</p>



BCS Trig/Pre-Calculus Curriculum Map

Revised June 2019

3 rd 9 Weeks	Chapter 1 – Functions and Graphs	Standards
	<p>1.1 – Graphs and Graphing Utilities – All (1 day – or just give assignment)</p> <p>1.2 - Basics of Functions and Their Graphs – All (2 days)</p> <p>1.3 – More on Functions and Their Graphs – All (2 – 3 days)</p> <p>1.4 – Linear Functions and Slope – All (3 – 4 days)</p> <p>1.5 - More on Slope – All (2 days)</p> <p>1.6 - Transformations of Functions – All (2 days)</p> <p>1.7 – Combinations of Functions; Composite Functions All (3 days)</p> <p>1.8 – Inverse Functions – All (2 days)</p> <p>1.9 - Move to Chapter 9</p> <p>1.10 – Modeling With Functions – All (1 day) – IF TIME</p>	<p>M.4HSTP.20</p> <p>M.4HSTP.21</p>

3 rd 9 Weeks	Chapter 2 – Polynomial and Rational Functions	Standards
	<p>2.1 – Complex Numbers All (2 Days)</p> <p>2.2 – Quadratic Functions All (2 Days) Move to Chapter 9</p> <p>2.3 – Polynomial Functions and Their Graphs All (3 Days)</p> <p>2.4 – Dividing Polynomials; Remainder and Factor Theorems All (2 Days)</p> <p>2.5 – Zeros of Polynomial Functions All (2 Days - Practice Exercises 1 - 24 ONLY)</p> <p>2.6 – Rational Functions and Their Graphs All (4 Days)</p> <p>2.7 – Polynomial and Rational Inequalities If time permits</p> <p>2.8 - Modeling Using Variation - If time permits</p>	<p>M.4HSTP.1</p> <p>M.4HSTP.3</p> <p>M.4HSTP.19</p>



BCS Trig/Pre-Calculus Curriculum Map

Revised June 2019

4 th 9 Weeks	Chapter 3 – Exponential and Logarithmic Functions	Standards
	<p>3.1 – Exponential Functions All (2 Days -Do complicated problems with graphing calculator.)</p> <p>3.2 – Logarithmic Functions All (2 Days - Practice Exercises 1 - 42 and 81 - 100 ONLY)</p> <p>3.3 – Properties of Logarithms All (3 Days - Practice Exercises 1 - 78 ONLY)</p> <p>3.4 – Exponential and Logarithmic Equations All (3 Days - Practice Exercises 1 -22 and 49 - 92 ONLY)</p> <p>3.5 – Exponential Growth and Decay: Modeling Data Skip</p>	<p>M.4HSTP.22</p>

4 th 9 Weeks	Chapter 9 – Conic Sections and Analytic Geometry	Standards
	<p>2.2 – Quadratic Functions – All (2 days)</p> <p>9.3 – The Parabola All (5 Days - Practice Exercises 1 - 56)</p> <p>1.9 – Distance and Midpoint Formulas; Circles All (5 Days - Practice Exercises 1 - 64)</p> <p>9.1 – The Ellipse All (5 days Practice Exercises 1 – 60)</p> <p>9.2 – The Hyperbola All (5 Days - Practice Exercises 1 - 50)</p> <p>9.4 – Rotation of Axes Skip</p> <p>9.5 – Parametric Equations Skip</p> <p>9.6 – Conic Sections in Polar Coordinates Skip</p> <p>Supplement – Cavalieri’s Principle for the formulas for the volume of a sphere and other solid figures.</p>	<p>M.4HSTP.30 M.4HSTP.31</p>



BCS Trig/Pre-Calculus Curriculum Map

Revised June 2019

4 th 9 Weeks	Chapter 10 – Sequences, Induction, and Probability	Standards
	<p>10.1 – Sequences and Summation Notation If time permits</p> <p>10.2 – Arithmetic Sequences If time permits</p> <p>10.3 – Geometric Sequences and Series If time permits</p> <p>10.4 – Mathematical Induction If time permits</p> <p>10.5 – The Binomial Theorem If time permits</p> <p>10.6 – Counting Principles, Permutations, and Combinations If time permits</p> <p>10.7 – Probability If time permits</p>	<p>M.4HSTP.34</p> <p>M.4HSTP.35</p> <p>M.4HSTP.37</p> <p>M.4HSTP.38</p> <p>M.4HSTP.39</p> <p>M.4HSTP.40</p>

4 th 9 Weeks	Supplement For These Standards	Standards
	<p>Graph probability distributions using the same graphical displays as for data distributions.</p> <p>Calculate the expected value of a random variable; interpret it as the mean of the probability distribution.</p> <p>Develop a probability distribution for a random variable defined for a sample space in which theoretical probabilities can be calculated; find the expected value.</p> <p>Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values.</p>	<p>M.4HSTP.32</p> <p>M.4HSTP.33</p> <p>M.4HSTP.34</p> <p>M.4HSTP.35</p> <p>M.4HSTP.36</p>