BERTHA-HEWITT HIGH SCHOOL
Curriculum Map

2014-15

Steve Riewer -- Instructor

Academic Standard Area: **Math** *Course Title/Strand:* **Advanced Algebra** *Grade Level:* **10-12**
Textbook & Copyright: **McDougal Littell Advanced Algebra 2 2007**

CONTENT/UNIT/SUB-STRAND	PROCESS/ACTIVITY/STANDARD	ASSESSMENT
Chapter 1 Equations and Inequalities	Apply Properties of Real Numbers Evaluate and Simplify Algebraic Expressions Solve Linear Equations Rewrite Formulas and Equations Use Problem Solving Strategies and Models Solve Linear Inequalities Solve Absolute Vale Equations and Inequalities	Chapter Test Date September 9, 2014
Chapter 2 Linear Equations and Functions	Represent Relations and Functions Find Slope and Rate of Change Graph and Write Equations of Lines Model Direct Variation Draw Scatter Plots and Best-Fitting Lines Use Absolute Value Functions and Transformations Graph Linear Inequalities in Two Variables	Chapter Test Date October 29, 2014
Chapter 3 Linear Systems and Matrices	Solve Linear Systems by Graphing Solve Linear Systems Algebraically Graph Systems of Linear Inequalities Solve Systems of Linear Inequalities in Three Variables Perform Basic Matrix Operations Multiply Matrices Evaluate Determinant and Apply Cramer's Rule Use Inverse Matrices to Solve Linear Systems	Chapter Test Date December 5, 2014
Chapter 4 Quadratic Functions and Factoring	Graph Quadratic Functions in Standard Form Graph Quadratic Functions in Vertex or Intercept Form Solve $x^2 + bx + c = 0$ by Factoring Solve $ax^2 + bx + c = 0$ by Factoring Solve Quadratic Equations by Finding Square Roots Perform Operations with Complex Numbers Complete the Square Use the Quadratic Formula and the Discriminant Graph and Solve Quadratic Inequalities Write Quadratic Functions and Models	Chapter Test Date February 5, 2015
Chapter 5 - Polynomials and Polynomial Functions	Use Properties of Exponents Evaluate and Graph Polynomial Functions Add, Subtract, and Multiply Polynomials Factor and Solve Polynomial Equations Apply the Remainder and Factor Theorems Find Rational Zeros Apply the Fundamental Theorem of Algebra Analyze Graphs of Polynomial Functions Write Polynomial Functions and Models	Chapter Test Date March 17, 2015
Chapter 6 - Rational Exponents and Radical Functions	Evaluate nth Roots and Use Rational Exponents Apply Properties of Rational Exponents Perform Function Operations and Composition Use Inverse Functions Graph Square Root and Cube Root Functions Sole Radical Equations	Chapter Test Date April 22, 2015
Chapter 7 – Exponential and Logarithmic Functions	Graph Exponential Growth and Decay Functions Use Functions Involving e Evaluate Logarithms and Graph Logarithmic Functions Apply Properties of Logarithms Solve Exponential and Logarithmic Equations Write and Apply Exponential and Power Functions	Chapter Test Date May 21, 2015

Advanced Algebra III/IV	**For 2014-15 We began with Chapter 9 since this group had finished through Chapter 8 in the previous year.**	
Chapter 8 – Rational Functions	Model Inverse and Joint Variation Graph Simple Rational Functions Graph General Rational Functions Multiply, Divide, Add, and Subtract Rational Expressions Solve Rational Equations	Chapter Test Date Previous year
Chapter 9 - Quadratic Relations and Conic Sections	Apply the Distance and Midpoint Formulas Graph and Write Equations of Parabolas, Circles, Ellipses, and Hyperbolas Translate and Classify Conic Sections Solve Quadratic Systems	Chapter Test Date October 3, 2014
Chapter 10 – Counting Methods and Probability	Apply the Counting Principle and Permutations Use Combinations and the Binomial Theorem Define and Use Probability Find Probabilities of Disjoint and Overlapping Events Find Probabilities of Independent and Dependent Events Construct and Interpret Binomial Distributions	Chapter Test Date November 14, 2014
Chapter 11 – Date Analysis and Statistics	Find Measures of Central Tendency and Dispersion Apply Transformations to Data Use Normal Distributions Select and Draw Conclusions from Samples Choose the Best Model for Two-Variable Data	Chapter Test date December 4, 2014
Chapter 12 – Sequences and Series	Define and Use Sequences and Series Analyze Arithmetic and Geometric Sequences and Series Find Sums of Infinite Geometric Series Use Recursive Rules with Sequences and Functions	Chapter Test Date December 19, 2014
Chapter 13 – Trigonometric Ratios and Functions	Use Trigonometry with Right Triangles Define General Angles and Use Radian Measure Evaluate Trigonometric Functions of Any Angle Evaluate Inverse Trigonometric Functions Apply the Law of Signs and the Law of Cosines	Chapter Test Date February 11, 2015
Chapter 14 – Trigonometric Graphs, Identities, and Equations	Graph Sine, Cosine, and Tangent Functions Translate and Reflect Trigonometric Graphs Verify Trigonometric Identities Solve Trigonometric Equations Write Trigonometric Functions and Models Apply Sum and Difference Formulas Apply Double-Angle and Half-Angle Formulas	Chapter Test Date March 17, 2015
FST Text Chapter 1 Exploring Data	Tables and Graphs, Stemplots, Dotplots, Measures of Center and Dispersion, Quartiles, Percentiles and Box Plots	Chapter Test Date April 22, 2015
FST Text Chapter 2 Functions and Models	Linear, Exponential, Quadratic and Power Models using Regression Analysis	Chapter Test Date May 20, 2015