**Foundations of Mathematics and Pre – Calculus 10**

**Course Outline**

**2010 – 2011**

**Ms. Christa Millions**

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| **Chapter** | **Outcomes** | **Time Line**  (Approximate) |
| Chapter 1  Measurement | FP10.3 Demonstrate understanding of SI and imperial units of measurement including:   * linear measurement * surface area of spheres, and right cones, cylinders, prisms, and pyramids * volume of spheres, and right cones, cylinders, prisms, and pyramids * relationships between and within measurement systems. | 11 |
| Chapter 2  Trigonometry | FP10.4 Develop and apply the primary trigonometric ratios (sine, cosine, tangent) to solve problems that involve right triangles. | 13 |
| Chapter 3  Factors and Products | FP10.1 Demonstrate understanding of factors of whole numbers by determining the:   * prime factors * greatest common factor * least common multiple * principal square root * cube root.   FP10. 5 Demonstrate understanding of the multiplication and factoring of polynomial expressions (concretely, pictorially, and symbolically) including:   * multiplying of monomials, binomials, and trinomials * common factors * trinomial factoring * relating multiplication and factoring of polynomials. | 12 |
| Chapter 4  Roots and Powers | FP10.2 Demonstrate understanding of irrational numbers in both radical (including mixed radical) and exponent forms through:   * representing * identifying * simplifying * ordering * relating to rational numbers * applying exponent laws. | 12 |
| Chapter 5  Relations and Functions | FP10.6 Expand and apply understanding of relations and functions including:   * relating data, graphs, and situations * analyzing and interpreting * distinguishing between relations and functions.   FP10.9 Demonstrate understanding of the writing and application of equations of linear relations, given:   * a graph of a relation * a point that satisfies a relation and the slope of the relation * two distinct points that satisfy a relation * a point that satisfies the relation and the equation of a line parallel or perpendicular to the relation. | 13 |
| Chapter 6  Linear Functions | FP10.7 Demonstrate, with and without the use of technology, understanding of slope (concretely, pictorially, and symbolically) with respect to:   * line segments and lines * rate of change * ratio of rise to run * parallel lines * perpendicular lines.   FP10.8 Demonstrate understanding of linear relations including:   * representing in words, ordered pairs, tables of values, graphs, function notation, and equations * determining characteristics including intercepts, slope, domain, and range * relating different equation forms to each other and to graphs. | 12 |
| Chapter 7  Systems of Linear Equations | FP10.10 Solve problems that involve systems of linear equations in two variables, graphically and algebraically. | 10 |
|  | Final Review | 3 |