Week Number	LECTURE AND READING MATERIAL	HOMEWORK
2		
9/5	**Syllabus** **Pretest**	
9/7	**1.5: Quadratic Equations** ➢ **Solve quadratic equations by factoring, by the square root property, by completing the square, by using the quadratic formula.** ➢ **Use the discriminant to determine the number and type of solutions.** ➢ **Solve problems modeled by quadratic equations.**	**Due 9/26 by 10am**
3		
9/12	**1.6: Other Types of Equations** ➢ **Solve polynomial equations by factoring, Solve radical equations, Solve equations with rational exponents, Solve equations that are quadratic in form, Solve equations involving absolute value.** ➢ **Solve application problems**	**Due 9/26 by 10am**
9/14	**2.1: Basics of Functions and Their Graphs** ➢ **Find the domain and range of a relation. Determine whether a relation is a function.** ➢ **Determine whether an equation represents a function.** ➢ **Evaluate a function. Graph functions by plotting points.** ➢ **Use the vertical line test to identify functions.** ➢ **Obtain information about a function from its graph. Identify intercepts from a function's graph.**	**Due 9/26 by 10am**

Week Number	LECTURE AND READING MATERIAL	HOMEWORK
4		
9/19	**2.2: More on Functions and Their Graphs** ➢ **Identify intervals on which a function increases, decreases, or is constant.** ➢ **Use graphs to locate relative maxima or minima.** ➢ **Identify even or odd functions and recognize their symmetries.** ➢ **Understand and use piecewise functions.** ➢ **Find and simplify a function's difference quotient.**	**Due 9/26 by 10am**
9/21	**Test 1 Review**	
5		
9/26	**Test 1 Covers 1.5, 1.6, 2.1, 2.2**	**All HW for Test 1 due this day by 10am**
9/28	**2.3: Linear Functions and Slope** ➢ **Calculate a line's slope.** ➢ **Write the point-slope form of the equation of a line.** ➢ **Write and graph the slope-intercept form of the equation of a line.** ➢ **Graph horizontal or vertical lines.** ➢ **Recognize and use the general form of a line's equation.** ➢ **Use intercepts to graph the general form of a line's equation.** ➢ **Model data with linear functions and make predictions.**	**Due 10/24 by 10am**

Week Number	LECTURE AND READING MATERIAL	HOMEWORK
6		
10/3	**2.4: More on Slope** ➢ **Find slopes and equations of parallel and perpendicular lines.** ➢ **Interpret slope as rate of change.** ➢ **Find a function's average rate of change.**	**Due 10/24 by 10am**
10/5	**2.5-1: Transformations of Functions** ➢ **Recognize graphs of common functions. (Read this part before class starts)** ➢ **Use vertical shifts to graph functions.** ➢ **Use horizontal shifts to graph functions.** ➢ **Use reflections to graph functions.** ➢ **Use vertical stretching and shrinking to graph functions.**	**Due 10/24 by 10am**
7		
10/10	**2.5-2: Transformations of Functions (Cont.)** ➢ **Use horizontal stretching and shrinking to graph functions.** ➢ **Graph functions involving a sequence of transformations.** **2.6-1: Combinations of Functions; Composite Functions** ➢ **Find the domain of a function.**	**Due 10/24 by 10am**
10/12	**2.6-2: Combinations of Functions; Composite Functions (Cont.)** ➢ **Combine functions using the algebra of functions, specifying domains.** ➢ **Form composite functions.** ➢ **Determine domains for composite functions.** ➢ **Write functions as compositions.**	**Due 10/24 by 10am**

Week Number	LECTURE AND READING MATERIAL	HOMEWORK
8		
10/17	**2.7: Inverse Functions** ➢ **Verify inverse functions.** ➢ **Find the inverse of a function.** ➢ **Use the horizontal line test to determine if a function has an inverse function.**	**Due 10/24 by 10am**
10/19	**2.8: Distance and Midpoint Formulas; Circles** ➢ **Find the distance between two points.** ➢ **Find the midpoint of a line segment.** ➢ **Write the standard form of a circle's equation.** ➢ **Give the center and radius of a circle whose equation is in standard form.** ➢ **Convert the general form of a circle's equation to standard form.** **Brief Review for Test 2 if time allows**	**Due 10/24 by 10am**
9		
10/24	**Test 2 Covers 2.3 through 2.8**	**All HW for Test 2 are due this day by 10am**
10/26	**3.1-1: Quadratic Functions** ➢ **Recognize characteristics of parabolas.** ➢ **Graph parabolas.** ➢ **Determine a quadratic function's minimum or maximum value.**	**Due 11/28 by 10am**

Week Number	LECTURE AND READING MATERIAL	HOMEWORK
10		
10/31	**3.1-2: Quadratic Functions** ➢ **Solve problems involving a quadratic function's minimum or maximum value.** **3.2-1: Polynomial Functions and Their Graphs** ➢ **Identify polynomial functions.** ➢ **Recognize characteristics of graphs of polynomial functions.**	**Due 11/28 by 10am**
11/2	**3.2-2: Polynomial Functions and Their Graphs (Cont.)** ➢ **Determine end behavior.** ➢ **Use factoring to find zeros of polynomial functions.** ➢ **Identify zeros and their multiplicities.** ➢ **Graph polynomial functions.**	**Due 11/28 by 10am**
11		
11/7	**3.3-1: Dividing Polynomials; Remainder and Factor Theorems** ➢ **Use long division to divide polynomials.** ➢ **Use synthetic division to divide polynomials.** ➢ **Evaluate a polynomial using the Remainder Theorem.**	**Due 11/28 by 10am**
11/9	**3.3-2: Dividing Polynomials; Remainder and Factor Theorems** ➢ **Use the Factor Theorem to solve a polynomial equation.** **3.4-1: Zeros of Polynomial Functions** ➢ **Use the Rational Zero Theorem to find possible rational zeros.**	**Due 11/28 by 10am**
12		
11/14	**3.4-2: Zeros of Polynomial Functions (Cont.)** ➢ **Find zeros of a polynomial function.** ➢ **Solve polynomial equations.**	**Due 11/28 by 10am**

Week Number	LECTURE AND READING MATERIAL	HOMEWORK
11/16	**3.5-1: Rational Functions and Their Graphs** ➢ **Find the domains of rational functions.** ➢ **Use arrow notation.** ➢ **Identify vertical asymptotes.**	**Due 11/28 by 10am**
13		
11/21	**3.5-2: Rational Functions and Their Graphs (Cont.)** ➢ **Identify horizontal asymptotes.** ➢ **Use transformations to graph rational functions.** ➢ **Graph rational functions.**	**Due 11/28 by 10am**
11/23	**Thanksgiving Day Holiday**	
14		
11/28	**Test 3 covers 3.1 through 3.5**	**All HW for Test 3 are due this day by 10am**
11/30	**4.1: Exponential Functions** ➢ **Evaluate exponential functions** ➢ **Graph exponential functions.** ➢ **Evaluate functions with base *e*.** ➢ **Use compound interest formulas.**	**Due 12/14 by 10am**

Week Number	LECTURE AND READING MATERIAL	HOMEWORK
15		
12/5	**4.2: Logarithmic Functions** ➢ **Change from logarithmic to exponential form.** ➢ **Change from exponential to logarithmic form.** ➢ **Evaluate logarithms.** ➢ **Use basic logarithmic properties.** ➢ **Graph logarithmic functions.** ➢ **Find the domain of a logarithmic function.** ➢ **Use common logarithms.** ➢ **Use natural logarithms.**	**Due 12/14 by 10am**
12/7	**4.3: Properties of Logarithms** ➢ **Use the product rule, quotient rule, power rule.** ➢ **Expand logarithmic expressions.** ➢ **Condense logarithmic expressions.** ➢ **Use the change-of-base property.**	**Due 12/14 by 10am**
16		
12/14	**The Final Exam is from 9:30-11:20 on Thursday, December 14th. The Final Exam is comprehensive with an emphasis on Chapter 4.**	

We will try to follow this schedule very closely. However, at times the course structure may need to be adjusted to provide for a better learning environment. Thus I reserve the right to make changes to the syllabus and this schedule. All changes will be announced in class.