Note to my students taking this online class:

- Even though this is an online class, to be successful you must work on the class material, particularly the homework assignments every week. Plan to spend at least 5-7 hours per week on this class. More time will be needed for complete mastery of the material.
- Each homework assignment begins with a media part which consists of one or more video lectures on the material of the section and the reading material from the eBook, followed by many questions/problems.
    - Start by watching the videos, take notes of the examples and make sure you understand all the examples in the videos.
    - Then skim through the reading material in the eBook, pay particular attention to the worked examples that illustrate the key objectives in each section as outlined in the calendar below.
    - Note that to complete the media portion for each assignment, you must click on all the video links and the eBook link.
    - Once you understand the examples in the videos and the eBook section, start working on the questions. Write down all your work neatly and carefully in a college-ruled spiral notebook.
    - The first few questions of each assignment usually require you to watch a video and then solve a problem similar to the one worked out in the video. Make sure to watch the video and apply the method there to solve the problem.
    - If you get stuck on a question, click on Question Help. Then you can View an Example similar to the question or click on Help Me Solve This to walk through all the steps of the solution and fill in the blank. If neither functions helps you, click on Ask My Instructor and email me, tell me specifically what you have tried, what you get stuck on and your question.
    - If you use the Question Help function, when you are done with the online question, write down the question in your notebook, and at the end go back and solve the question on your own without help. This will help you internalize the method of solving that question.
    - Use only a NON-GRAPHING, scientific calculator like the TI-30X when you work on your homework, because that is the type of calculator you will get when you take the test at a testing center.
    - All tests are proctored paper-pencil-test and you must take them at a LSC testing center or an approved testing center.
- The schedule below is my recommendation, which I strongly suggest you follow, of what sections and which objectives in each section that you should study each week.
- You cannot do well on the tests by cramming or simply watching the videos and read the eBook the night before. Mathematics, just like swimming, playing tennis or body building, requires constant efforts and practices. You cannot expect to get a six-pack the next day by going to the gym for the whole night the night before. Similarly, you cannot expect to get a good grade on the test by studying the night before.
- PowerPoint Slides and supplementary videos are posted on the class website and are helpful to understand the material and solve the homework problems. Make use of them.
- If at any time you need help or advice, I am an email away. Email me at vinh.x.dang@lonestar.edu and I will do my best to get you unstuck and move forward with the material.
- Exercise self-discipline, be patient, be perseverant, read the eBook sections, watch the videos, work hard on the homework problems and you will be successful.

Week Number	LECTURE AND READING MATERIAL	HOMEWORK
2 9/5-9/10		
	Syllabus **Review of Prerequisite Material**	
	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 Friday, 9/29 by 11:59pm**
3 9/11 – 9/17		
	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 Friday, 9/29 by 11:59pm**

Week Number	LECTURE AND READING MATERIAL	HOMEWORK
	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 Friday, 9/29 by 11:59pm**
4 9/18-9/24		
	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 Friday, 9/29 by 11:59pm**
	Review for Test 1	
5 9/25 – 10/1		

Test 1 Covers Sections 1.5, 1.6, 2.1, and 2.2. Test 1 is open from Tuesday, 09/26 through Tuesday, 10/03. You must take the test at an LSC testing center or an approved center. Please check the testing centers for their hours of operation. All tests are paper and pencil.

Week Number	LECTURE AND READING MATERIAL	HOMEWORK
	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 Friday, 10/27 by11:59pm**
6 10/2 – 10/8		
	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 Friday, 10/27 by11:59pm**
	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 Friday, 10/27 by11:59pm**

Week Number	LECTURE AND READING MATERIAL	HOMEWORK
7 10/9 – 10/15		
	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 Friday, 10/27 by11:59pm**
	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 Friday, 10/27 by11:59pm**
8 10/16-10/22		
	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 Friday, 10/27 by11:59pm**

Week Number	LECTURE AND READING MATERIAL	HOMEWORK
	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.** **Review for Test 2**	**Due Friday, 10/27 by11:59pm**
9 10/23-10/29		
Test 2 Covers Sections 2.3 through 2.8. Test 2 is open from Tuesday, 10/24 through Tuesday, 10/31. You must take the test at an LSC testing center or an approved center. Please check the testing centers for their hours of operation. All tests are paper and pencil.		
	3.1-1: Quadratic Functions ➢ **Recognize characteristics of parabolas.** ➢ **Graph parabolas.** ➢ **Determine a quadratic function's minimum or maximum value.**	**Due 12/01 Friday, by11:59pm**

Week Number	LECTURE AND READING MATERIAL	HOMEWORK
10 10/30-11/5		
	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 12/01 Friday, by11:59pm**
	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 12/01 Friday, by11:59pm**
11 11/6-11/12		
	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 Friday, 12/01 by11:59pm**
	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 Friday, 12/01 by11:59pm**

Week Number	LECTURE AND READING MATERIAL	HOMEWORK
12 11/13 – 1/19		
	3.4-2: Zeros of Polynomial Functions (Cont.) ➢ **Find zeros of a polynomial function.** ➢ **Solve polynomial equations.**	**Due Friday, 12/01 by11:59pm**
	3.5-1: Rational Functions and Their Graphs ➢ **Find the domains of rational functions.** ➢ **Use arrow notation.** ➢ **Identify vertical asymptotes.**	**Due Friday, 12/01 by11:59pm**
13 11/20-11/26		
	3.5-2: Rational Functions and Their Graphs (Cont.) ➢ **Identify horizontal asymptotes.** ➢ **Use transformations to graph rational functions.** ➢ **Graph rational functions.** **Review for Test 3**	**Due Friday, 12/01 by11:59pm**
	Thanksgiving Day Holiday	
14 11/27 – 12/3		
Test 3 Covers Sections 3.1 through 3.5. Test 3 is open from Monday, 11/28 through Saturday, 12/2. You must take the test at an LSC testing center or an approved center. Please check the testing centers for their hours of operation. All tests are paper and pencil.		

Week Number	LECTURE AND READING MATERIAL	HOMEWORK
	4.1: Exponential Functions ➢ **Evaluate exponential functions** ➢ **Graph exponential functions.** ➢ **Evaluate functions with base *e*.** ➢ **Use compound interest formulas.**	**Due Thursday, 12/14 by 11:59pm**
15 12/4 – 12/10		
	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 Thursday, 12/14 by11:59pm**
	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 Thursday, 12/14 by11:59pm**
16 12/11-12/14		
The Final Exam is COMPREHENSIVE with an emphasis on Chapter 4. The final exam is open from Monday, 12/11 through Thursday, 12/14. You must take the test at an LSC testing center or an approved center. Please check the testing centers for their hours of operation. All tests are paper and pencil.		