Chapter 3 SYLLABUS

PRE-CALC

ALGEBRA and TRIGONOMETRY, YOUNG 2nd Ed.

**Section 3.1 Functions (2/28/2013)**

Students must be able to determine if a relation is a function, an equation represents a function, find the value of a function (from an equation or a graph), determine both domain and range of a function, and evaluate the difference quotient.

Students should be able to: use the vertical line test, function notation, and evaluate functions including the domain and range.

ASSIGNMENT: pp 239-241 1-23 (odd), 25-28, 30, 33-35, 41-46, 57,60, 65, 69-73, 80, 82-88 (even) DUE: 3/1/2013 (notebook)

**Section 3.2 Graphs of Functions: Piece-wise, increasing and decreasing, and rate of change.   
(3/4/2013)**

Students must be able to recognize and graph the 9 common functions, use the graphs of piece-wise functions to evaluate them, classify functions as even or odd or neither, determine the intervals on which functions are increasing or decreasing, calculate the average rate of change, and evaluate the difference quotient for a function.

They must be able to use their graphing calculator to help them identify intervals on which functions are increasing, decreasing or constant.

ASSIGNMENT: pp 258-262 1-8, 25-32, 37, 40,41, 45, 47, 50, 53, 56, 63, 81, 83, 92

DUE: 3/6/2013 (notebook)

**QUIZ on 3.1 and 3.2 on 3/7/2013**

**Section 3.3 Graphing Functions: Transformations (3/8/2013)**

Students must be able to sketch the graph of a function using horizontal and vertical shifting techniques, reflecting about either axis, stretching or compressing or a combination of these techniques.

We are only covering the basics here, so we will finish this in one day.

ASSIGNMENT: pp 274 - 277 1-24, 26, 27, 35, 45, 59-63(describe in WORDS the shift taking place) DUE: 3/11/2013 (notebook)

**Section 3.4 Operations on Functions and Composition of Functions (3/12/2013)**

Students should be able to add, subtract, multiply, and divide functions, evaluate the composition of functions, and determine the domains resulting from operations or composition.

ASSIGNMENT: pp 286 -288 1-3, 6, 9, 11-17(odd), 22, 25, 28-34, 39, 41, 44, 48, 52, 57, 78, 80 DUE: 3/13/2013

**Section 3.5 One to One Functions and Inverses (3/14/2013)**

Students should be able to determine if a function is one-to-one both graphically and algebraically and also find the inverse of a given function (when it exists).

ASSIGNMENT: pp. 299 – 302 1-7, 11-15, 17, 18, 22, 24, 28, 33, 36, 39, 43, 47, 49, 50, 57, 71 DUE: (3/15/2013)

**QUIZ on sections 3.3, 3.4, and 3.5 – 3/18/2013**

**Chapter 2 TEST (2.1 – 2.4) on 3/20/2013 or 3/21/2013**