**Math 20095 Sections (041-060) Spring 15 Algebra for Calculus – Stretch I updated Dec 10 2014**

Text: A custom edition Beecher, Penna, Bittinger (2012). *College Algebra 4th edition*, *Intermediate Algebra 12th Edition* chapters 4 & 5, *ebook* 00023 Sec 2.4, *ebook* 00024 Sec 1.1 & 1.2 renamed as sections A, B, C.

Software: MyLabsPlus

First Semester 45 days: MTR Schedule with notes. IA means Intermediate Algebra Text.

**Intermediate and Advanced Factoring, exponents-integer and rational**

***Jan 12***  **R2** Integer Exponents pg 14 HW 1-49odd and **R7** Rational Exponents pg 50 HW 87-93,97-109 odds

 ***13*** 4.3 IA text Simple GCF, Factor by Grouping pg 345 HW 1-29odd, 37-53 odd

 collect HW pg 347 68-71 all (not in software)

 ***15*** 4.4/4.5 *IA Text* Factoring Trinomials pg 352 HW 4.4 1-39odd 4.5 pg 362 HW 1-47 odd

 ***19*** *Martin Luther King*

***20*** 4.6 *IA Text* Special binomials, more factor by grouping 4.6 pg 372 HW 1-95odd

 ***22***4.7 *IA Text* General factoring strategies 4.7 pg 378 HW 1-55 odd

 ***26*** Quadratic Form A section pg A12 1-17 odd , Collect HW A12 1 – 17 odd

 ***27*** GCF with Negative and Rational Exponents B Section pg B7 1.1 1-31 odd, Collect HW B7 1 – 31 odd

***29*** Binomial Common Factors C section pg C9 1.2 1 - 31 odd, Collect C9 1 – 31 odd

***Feb 2*** Review

 ***3* Exam 1** Intermediate and Advanced Factoring, Exponents-integer and rational

**Functions in General**

 ***5*** 1.2 Functions and Graphs: Definition, function notation, reading function values from the graph,

 domain and range, vertical line test HW 1- 27 odd

 ***9*** 1.2 Cont’d HW 1-27odd, 35-49 odd, 53-69 odd, 81, 83, 93, Try 101, 51

 ***10*** 1.3 Average rate of change, graph line, interpret slope, write equation of line given variable and

 fixed costs. Review Slope 1.3 HW: 11,13,19,31,33,37,39 (5 -39 odd) then 1.3 HW 41-47odd,

 65-79 odd

 **12** 1.4 Linear Modeling (using data) Review writing equations HW 13,19,23,47 (7-29odd,43-49 odd)

 then HW 29, 61, 63, 65, Try 71, 72

 ***16*** 2.1 Increase/Decrease/Piecewise HW 1-11odd, 35-45odd, 53- 63odd

 ***17*** 2.2 Algebra of functions, Difference quotient (linear, quadratic, cubic)

 ***19*** 2.2 Cont’d HW 1-23odd, 33, 35, 39, 41, 45, 47, 49, 57, 59, 61, 65

 ***23*** Review

 ***24* Exam 2** Functions 1.2, 1.3, 1.4, 2.1, 2.2

**Quadratic Functions and Absolute Value**

***26*** 3.1 Complex Numbers HW can range from 1-73odd, 79-87,95,97 odd

 ***Mar 2*** 3.2A Solve quadratics by factoring and completing the square. HW 1-19 odd, 29-35 odd

 ***3*** 3.2B Discriminant, number of real solutions, Quadratic Formula, finding the zeroes of Quadratic

 Functions. HW 37-55odd,57-61odd,65,69,71,77

***5*** 3.2C Quadratic form equations. HW 79-93odd

 ***9*** 3.3A Vertex, min/max values – Analyze the graph of quadratic functions HW 1-23odd, 31-39odd

 ***10*** 3.3 B Quadratic Modeling HW 41-43,47-53 odd and 2.1 HW 23, 28, 31, 33 Do WS 1-8 all.

 ***12***  3.5 Absolute Equations and Inequalities HW 1-61odd

***16*** Review

 ***17* Exam 3** Quadratic Functions and Absolute Value 3.1-3.3, 3.5

**Polynomial Functions**

***19*** 4.1 End Behavior, Leading Term, Zeroes of Polynomials HW 1-51 odd

 \*For 27-41 determine if graph touches or crosses at each zero, see class notes.

Last day to Withdraw Sunday March 22

Spring Break March 23 – 29

***30*** 4.2 Graphing Polynomials HW 1-35 odd HW 1-35 odd

 ***31*** 4.3 Synthetic Division, Remainder and Factor Theorems HW 11-37 odd

 ***Apr*** ***2*** 4.4A Writing polynomials, list possible rational zeros, zeros of polynomials

 HW 1-23odd, 43- 47 odd

 ***6*** 4.4B Cont’d HW 49-57 odd, 61-75odd Zeros of polynomials

 ***7*** 4.6 Polynomial Inequalities HW 21, 25-49 odd

 ***9*** Review

 ***13*** **Exam 4** Polynomial Functions 4.1-4.4, 4.6

**Sequences and Series**

 ***14***8.1 Summation, Sigma notation, partial sums, recursive and explicit

 HW 1-25odd,29-43odd,47,51-71 odd

 ***15*** 8.1 *Cont’d* HW 1-25odd,29-43odd,47,51-71 odd

***20*** 8.2 Arithmetic Sequences HW 1-25odd, 31,33 odd, 39-47odd

  **21** 8.3 Geometric Sequences and Series HW 1-25odd, 33-39odd,43-49 odd, 57-63odd

 ***23*** 8.3Cont’dHW 1-25odd, 33-39odd,43-49 odd, 57-63odd

 **27** Review

 **28 Exam 5** Sequences and Series 8.1-8.3

 **30** Review for Final Exam

**May 5 Final Exam** (block final 3:15-5:30)