BRONX COMMUNITY COLLEGE of the City University of New York

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

**SYLLABUS:** MTH 06 – Basic Concepts of Mathematics II (0 credits, 6 hours per week)

**PREREQUISITES:** MTH 05 or equivalent and RDL 02 if required.

**TEXT:** *Elementary and Intermediate Algebra**,* ***Fifth Edition*** (The ***Hutchinson*** Series in Mathematics)

**AUTHORS:** Baratto, Bergman

**PUBLISHER:** McGraw-Hill, 2013

**SUPPLEMENTARY** **TEXT:** *Trigonometry*  *-- ISBN: 9781475074574; Electronic version can be downloaded at* [*http://mecmath.net/trig/trigbook.pdf*](http://mecmath.net/trig/trigbook.pdf)

**AUTHOR:** Michael Corral

**Note to Students:** A scientific calculator with trigonometric functions such as *sin, cos* is required

# SECTIONS TOPICS SUGGESTED EXERCISES

# CHAPTER 7 Radicals and Exponents (12 hours)

7.1 Roots and Radicals pp. 560-561: 1-67 odd, optional 59-77 odd

7.2 Simplifying Radical Expressions pp. 573: 1-73 odd

7.3 Operations on Radical Expressions pp. 584-585: 1-85 odd

7.4 Solving Radical Equations pp. 593-595: 1-9 odd, 15-49 odd, 81-89 odd

7.5 Rational Exponents pp. 603-604: 1-105 odd

7.6 Complex Numbers pp. 611-613: 1-85 odd

# CHAPTER 8 Quadratic Functions (8 hours)

8.1 Solving Quadratic Equations pp. 634-639: 1 – 81 odd, 89-97 odd, 107-113 odd

8.2 The Quadratic Formula pp. 652-654: 1-83 odd

8.3 An Introduction to Parabolas pp. 666-668: 1- 53 odd

8.4 Problem Solving with Quadratics pp. 678-680: 1-21 odd, 41-44

# CHAPTER 9 Rational Expressions (12 hours)

9.1 Simplifying Rational Expressions pp. 698-700: 1-77 odd

9.2 Multiplying and Dividing Rational Expressions pp. 710: 1-41 odd

9.3 Adding and Subtracting Rational Expressions pp. 722-723: 1-59 odd

9.4 Complex Fractions pp. 731: 1-39 odd

9.6 Solving Rational Equations pp. 762-766: 1-101 odd

# CHAPTER 10 Exponential and Logarithmic Functions (8 hours)

10.4 Exponential Functions pp. 819-820: 1- 49 odd

10.5 Logarithmic Functions pp. 832-833: 1-73 odd

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***Trigonometry Supplement:***

**The Trigonometric Ratios (4** **hours),** pp. 1 -12 p.5-6: 1-15 odd; p.12-13: 1-33 odd

**Applying Right Triangles (4 hours),** pp. 14 -19 p. 20-23: 1,4,7,14,15,17,19,21,23,27

**The Trigonometric Functions and**

**Cartesian Coordinates (5 hours),** pp. 24-31 p. 31: 1-39 odd

**Rotations and Reflections of Angles (2 hours),** pp. 32-36 p. 37: 1-13 odd

 **Circles and Radian Measure (4 hours),** pp.87- 89; 90-93, p.94: 1-6

 **The Unit Circle and**

 **the Trigonometric Functions (5 hours),** pp.103 p. 108: 13,14,15

**Graphing the Trigonometric Functions (6 hours),** pp.103-108 p. 108: 1,9,10
 (Explore graphs of the type *y* = A sin *x*, *y* = A cos *x* only)

**Trigonometric Identities (2 hours),** pp.65 - 69 p. 70: 1,2, 5-15 odd

KF/January 2003 Updated SEP July 2003, SEP Jan 2004, MM Jan 2005,

PhRo: May 2007, Feb 2008, Aug 2008, IP Dec 2010, IP Sep 2013, QF Aug 2016

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