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* ***/*** *A**Unified Approach,* ***Fourth Edition*** (The ***Streeter/Hutchinson*** Series in Mathematics)

**AUTHORS:** Baratto, Bergman

**PUBLISHER:** McGraw-Hill, 2011

**SUPPLEMENTARY** **TEXT:** *Trigonometry Supplement*(Bronx Community College), McGraw-Hill 2008

**AUTHOR:** Bergman

**SPECIAL FEATURES:** A free, text specific, CD-ROM is included.

Supported by ALEKS: [www.highed.aleks.com](http://www.highed.aleks.com)

**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. 723-728: 1-55 odd, optional 57-65 odd

7.2 Simplifying Radical Expressions pp. 737-741: 1-73 odd

7.3 Operations on Radical Expressions pp. 751-753: 1-83 odd

7.4 Solving Radical Equations pp. 762-766: 1-9 odd, 15-49 odd, 79-87 odd

7.5 Rational Exponents pp. 775-778: 1-109 odd

7.6 Complex Numbers pp. 788-792: 1-85 odd

# CHAPTER 8 Quadratic Functions (8 hours)

8.1 Solving Quadratic Equations pp. 817-819: 1 – 53 odd, optional circle problems

8.2 The Quadratic Formula pp. 833-837: 1-77 odd

8.3 An Introduction to Parabolas pp. 849-852: 1- 53 odd

8.4 Problem Solving with Quadratics pp. 865-868: 1-21 odd, 41-44

# CHAPTER 9 Rational Expressions (12 hours)

9.1 Simplifying Rational Expressions pp. 888-890: 1-79 odd

9.2 Multiplying and Dividing Rational Expressions pp. 901-903: 1-43 odd

9.3 Adding and Subtracting Rational Expressions pp. 914-916: 1-57 odd

9.4 Complex Fractions pp. 925-926: 1-39 odd

9.6 Solving Rational Equations pp. 962-967: 1-79 odd

# CHAPTER 10 Exponential and Logarithmic Functions (8 hours)

10.4 Exponential Functions pp. 1025-1027: 1- 49 odd

10.5 Logarithmic Functions pp. 1043-1045: 1-73 odd

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***Trigonometry Supplement:***

**The Trigonometric Ratios (4** **hours),** pp. 51 – 57 p. 58-62: 1- 45 odd, 51-55 odd, 75-93 odd

**Applying Right Triangles (4 hours),** pp. 72 – 81 p. 82-85: 1-51 odd

**The Trigonometric Functions and**

**Cartesian Coordinates (6 hours),** pp. 100 – 111 p. 112-114: 1-85 odd

 **Circles and Radian Measure (4 hours),** pp.126 – 136 p. 137/138: 1-77 odd

 **The Unit Circle and**

 **the Trigonometric Functions (6 hours),** pp.148 – 156 p. 157-159: 1-75 odd

**Graphing the Trigonometric Functions (6 hours),** pp.168 – 174 p. 175/176: 1-31 odd
 (Explore graphs of the type *y* = A sin *x*, *y* = A cos *x* only)

**Trigonometric Identities (2 hours),** pp.184 – 191 p. 192/193: 1-25 odd, 39 - 67 odd

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

PhRo: May 2007, Feb 2008, Aug 2008, IP Dec 2010

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