

**BRONX COMMUNITY COLLEGE LIBRARY  
SUGGESTED FOR  
MTH 30  
PRE-CALCULUS MATHEMATICS**

**TEXTBOOK: PRECALCULUS ESSENTIALS, 3<sup>rd</sup> Edition  
AUTHOR: ROBERT E. BLITZER**

*Section numbers are according to the Textbook*

**CODE NO.   BOOK SECTION   TITLE**

**CHAPTER 1: FUNCTIONS AND GRAPHS**

**CONTEMPORARY PRE-CALCULUS: A GRAPHING APPROACH  
(SERIES) 4th Edition**

|         |     |                               |
|---------|-----|-------------------------------|
| V3455.1 |     | BASICS -95min                 |
| V3455.1 |     | GRAPHS AND TECHNOLOGY -95 min |
| V3455.2 | 1.2 | FUNCTIONS AND GRAPHS -80 min  |

**PRECALCULUS, 4<sup>th</sup> Edition – Michael Sullivan (SERIES) -368 min, c1996**

|         |     |                                      |
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| V2583.5 | 1.2 | BASICS OF FUNCTIONS AND THEIR GRAPHS |
|---------|-----|--------------------------------------|

**ELEMENTARY AND INTERMEDIATE ALGEBRA 2<sup>nd</sup> Edition  
(SERIES) - c2004**

|         |     |                                       |
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| V3464.4 | 1.1 | A BEGINNING LOOK AT FUNCTIONS -41 min |
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**PRE-CALCULUS (SERIES)**

|          |     |                                                                                                                                        |
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| V1670. 2 | 1.3 | GRAPHS IN THE COORDINATE PLANE; THE DISTANCE FORMULA; GRAPHS AND EQUATIONS; CIRCLES IN THE PLANE (Video Tutorial Series) -50min, c1990 |
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| V1670. 3 | 1.3 | FUNCTIONS; DOMAIN, RANGE AND GRAPH OF A FUNCTION; GRAPHIC TECHNIQUES; LINEAR FUNCTIONS & GRAPHS (Video Tutorial Series) -50min, c1990 |
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|         |     |                                                                                                                    |
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| V1670.4 | 1.7 | THE ALGEBRA OF FUNCTIONS AND COMPOSITION; ONE-TO-ONE FUNCTIONS AND INVERSES (Video Tutorial Series) -33 min, c1990 |
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**CHAPTER 1: FUNCTIONS AND GRAPHS (Cont'd)**

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| V2977.25 | 1.8 | INVERSE FUNCTIONS (Algebra: A Combined Approach Series) – 25min, c1999 |
|----------|-----|------------------------------------------------------------------------|

**CHAPTER 2: POLYNOMIAL AND RATIONAL FUNCTIONS**

|          |                   |                                                                                                                                                                                                  |
|----------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| V1670.5  | 2.2<br>2.3<br>2.6 | <b>QUADRATIC FUNCTIONS</b> ( <i>Emphasize completing the square</i> )<br><b>POLYNOMIAL FUNCTIONS &amp; GRAPHS</b><br><b>GRAPHIC RATIONAL FUNCTIONS</b><br>(Video Tutorial Series) - 50min, c1990 |
| V2977.24 | 2.2               | <b>QUADRATIC FUNCTIONS AND THEIR GRAPHS</b><br>(Algebra: A Combined Approach Series) – 60min, c1999                                                                                              |
| V2977.11 | 2.4               | <b>DIVIDING POLYNOMIALS</b><br>(Algebra: A Combined Approach Series) – 60min, c1999                                                                                                              |
| V2977.17 | 2.6<br>2.7        | <b>POLYNOMIALS AND RATIONAL FUNCTIONS</b><br>(Algebra: A Combined Approach Series) – 30min, c1999                                                                                                |
| V2583.5  | 2.6               | <b>FUNCTIONS AND THEIR GRAPHS</b><br><b>POLYNOMIAL AND RATIONAL FUNCTIONS</b><br>(Pre-Calculus 4 <sup>th</sup> edition Series) – 75min, c1996                                                    |
| V3455.3  |                   | <b>POLYNOMIAL AND RATIONAL FUNCTIONS</b><br>(Contemporary Pre-Calculus: A Graphing Approach 4 <sup>th</sup> Ed. Series)<br>-122 min, c 2004                                                      |

**CHAPTER 3: EXPONENTIAL AND LOGARITHMIC FUNCTIONS**

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| V2583.4  | 3.1<br>3.2 | <b>EXPONENTIAL FUNCTIONS</b><br><b>LOGARITHMIC FUNCTIONS</b> – 120min, c1996 |
| V3464.13 | 3.1<br>3.2 | <b>EXPONENTIAL FUNCTIONS</b><br><b>LOGARITHMIC FUNCTIONS</b> -47 min, c2004  |
| V3455.4  | 3.4        | <b>EXPONENTIAL AND LOGARITHMIC FUNCTIONS</b><br>-90 min, c 2004              |

**CHAPTER 4: TRIGONOMETRIC FUNCTIONS**

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| DVD770.1 | 4.1 | <b>ANGLES, DEGREES, AND RADIANS</b> -23 min, c1988                                                                                         |
| DVD770.1 | 4.2 | <b>TRIGONOMETRIC FUNCTIONS</b> -24 min, c1988                                                                                              |
| V1670.2  | 4.2 | <b>GRAPHS IN THE COORDINATE PLANE;</b><br><b>THE DISTANCE FORMULA; GRAPHS AND</b><br><b>EQUATIONS; CIRCLES IN THE PLANE</b> – 30min, c1990 |
| V3455.7  | 4.3 | <b>TRIANGLE TRIGONOMETRY</b> -68 min, c2004                                                                                                |

**CHAPTER 4: TRIGONOMETRIC FUNCTIONS**

|                 |            |                                                                                      |
|-----------------|------------|--------------------------------------------------------------------------------------|
| <b>DVD770.3</b> | <b>4.3</b> | <b>RIGHT TRIANGLE APPLICATIONS</b> -27 min, c1988                                    |
| <b>DVD770.1</b> | <b>4.4</b> | <b>GENERAL ANGLES</b> -30 min, c1988                                                 |
| <b>DVD770.4</b> | <b>4.5</b> | <b>LAW OF SINES</b><br><b>GRAPHS OF SINES &amp; COSINE FUNCTIONS</b> - 34 min, c1988 |
| <b>DVD770.4</b> | <b>4.5</b> | <b>LAW OF COSINES</b> - 34 min, c1988                                                |
| <b>DVD770.3</b> | <b>4.7</b> | <b>INVERSE FUNCTIONS</b> -26 min, c 1988                                             |

**CHAPTER 5: ANALYTIC TRIGONOMETRY****CONTEMPORARY PRE-CALCULUS: A GRAPHING  
APPROACH, 4<sup>th</sup> Ed. – Thomas W. Hungerford - (SERIES)**

|                |            |                                                                                                               |
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| <b>V3455.6</b> | <b>5.1</b> | <b>TRIGONOMETRIC IDENTITIES AND EQUATIONS</b><br>-65 min, c2004                                               |
| <b>V2583.3</b> | <b>5.1</b> | <b>ANALYTIC TRIGONOMETRY/ADDITIONAL<br/>APPLICATIONS OF TRIGONOMETRY/ANALYTIC<br/>GEOMETRY</b> – 60min, c1996 |
| <b>V3455.5</b> |            | <b>TRIGONOMETRIC FUNCTIONS</b> -83 min, c2004                                                                 |

**BRONX COMMUNITY COLLEGE**  
of the City University of New York

**DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE**

**SYLLABUS: MTH 30 - Precalculus (4 Credits - 4 Hours per week)**

**Prerequisite: MTH 06 or equivalent**

**TEXT: Precalculus Essentials (Third Edition) by Robert E. Blitzer, Prentice-Hall**

| <u>SECTION</u>                               | <u>TOPIC</u>                                           | <u>SUGGESTED EXERCISES</u>                             |
|----------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|
| <b>Functions and Graphs</b>                  |                                                        |                                                        |
| 1.2                                          | Basics of Functions and their Graphs                   | 159/ 11-31 (odd), 45, 47, 53 -57, 71, 72, 75, 76       |
| 1.3                                          | More on Functions and their Graphs                     | 173/ 11, 15, 17, 23, 69-76, 81                         |
| 1.6                                          | Transformations of Functions                           | 216/ 1-87 (odd)                                        |
| 1.7                                          | Combinations of Functions;<br>Composite Functions      | 229/ 5-11, 17-33, 49-57, 81-88                         |
| 1.8                                          | Inverse Functions                                      | 240/ 1-5, 11-25, 29-37                                 |
| <b>Polynomial and Rational Functions</b>     |                                                        |                                                        |
| 2.2                                          | Quadratic Functions                                    | 298/ 9-55 (odd)                                        |
| 2.3                                          | Polynomial Functions and<br>Their Graphs               | 312/ 3-7, 15-20, 21, 25, 27-33, 37, 39, 41-47          |
| 2.4                                          | Dividing Polynomials;<br>Remainder and Factor Theorems | 324/ 13, 15, 17-25, 33-41                              |
| 2.5                                          | Zeroes of Polynomial Functions                         | 335/ 1-17, 19, 21, 23, 25-31 (odd)                     |
| 2.6                                          | Rational Functions and<br>Their graphs                 | 354/ 1-7, 9-14, 21-35, 37, 41, 49, 55, 63              |
| 2.7                                          | Polynomial and Rational Inequalities                   | 366/1-23 (odd), 43-45, 55-57, 69, 70                   |
| <b>Exponential and Logarithmic Functions</b> |                                                        |                                                        |
| 3.1                                          | Exponential Functions                                  | 396/ 11-17, 19-24, 25-31, 35-37, 41, 43                |
| 3.2                                          | Logarithmic Functions                                  | 410/ 1-29, 43, 44, 47-53, 55, 59, 63, 71, 75-79, 81-89 |
| 3.3                                          | Properties of Logarithms                               | 421/ 1-27, 35, 37, 41-57, 67, 71-77                    |
| 3.4                                          | Exponential and Logarithmic<br>Equations               | 432/1-21, 27-43, 49-57, 67-69, 85, 87                  |

**Trigonometric Functions**

|     |                                             |                                |
|-----|---------------------------------------------|--------------------------------|
| 4.1 | Angles and Radian Measure                   | 472/1-10, 13-28, 41-56, 60-63  |
| 4.2 | Trigonometric Functions:<br>The Unit Circle | 486/ 1-55                      |
| 4.3 | Right Triangle Trigonometry                 | 498/ 3-15, 21-31               |
| 4.4 | Trigonometric Functions of<br>Any Angle     | 513/1-21, 23-27, 35-43, 61-73  |
| 4.5 | Graphs of Sine and Cosine Functions         | 533/1-25 (odd), 43-49          |
| 4.7 | Inverse Trigonometric Functions             | 563/ 1-11, 19-41, 47-53, 63-67 |

**Analytic Trigonometry**

|     |                                    |                                      |
|-----|------------------------------------|--------------------------------------|
| 5.1 | Verifying Trigonometric Identities | 594/ 1-35                            |
| 5.2 | Sum and Difference Formulas        | 603/ 1, 3, 5, 13, 15, 21, 23, 33, 35 |
| 5.5 | Trigonometric Equations            | 636/ 11, 15, 19, 25, 39, 41, 57, 59  |

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