

**BRONX COMMUNITY COLLEGE LIBRARY  
SUGGESTED FOR  
MTH 13  
TRIGONOMETRY & COLLEGE ALGEBRA**

**Textbook:** *Basic Technical Mathematics with Calculus, 9<sup>th</sup> Edition*  
**Authors:** Allyn J. Washington

**CHAPTER 9: VECTORS & OBLIQUE TRIANGLES**

**CODE NO.**

**TITLE**

**DVD724.5**

**THE MECHANICAL UNIVERSE: VECTORS - 30 min, c1985**  
**9.1 Introduction to Vectors**

**V3203.1**

**NUMBERS, UNITS, SCALARS, AND VECTORS - 34 min, c2000**  
**9.3 Vector Addition by Components**

**CHAPTER 12 COMPLEX NUMBERS**

**V2583.2**

**COUNTING; PROBABILITY (PRECALCULUS) - 74min, c1996**

**V2497**

**PROBABILITY - 13min, c1992**

**V2523.3**

**EXPONENTS (Lesson 19): MODUMATH ADVANCED ALGEBRA**  
**- 60min, c1994-96**

**V1502.9**

- **RAISE EXPONENTIAL NUMBERS TO A POWER -30min, c1991**
- **RAISE A PRODUCT TO A POWER**
- **DIVIDE EXPONENTIAL NUMBERS WITH THE SAME BASE**
- **RAISE A QUOTIENT TO A POWER**

**V1502.10**

**APPLY GENERAL RULE OF EXPONENTS USING ZERO,  
NEGATIVE, AND POSITIVE EXPONENTS - 30min, c1991**

**V1055.4**

**SOLVING SIMULTANEOUS EQUATIONS &  
INEQUALITIES ALGEBRAICALLY AND GEOMETRICALLY**  
**-37min, c1986**

**V1055.9**

**THE GEOMETRY OF PARALLEL LINES, GEOMETRIC FIGURES,  
THE PARALLELOGRAM, AND CIRCLES - 37min, c1986**

**V1502.12**

**FIND THE AREA OF GEOMETRIC FIGURES - 30min, c1991**

**BRONX COMMUNITY COLLEGE of the City University of New York**  
**DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE**

**SYLLABUS: MTH 13 – TRIGONOMETRY and COLLEGE ALGEBRA (3 credits, 4 hours)**

**PREREQUISITE: MTH 06 or equivalent**

**TEXTBOOK: “BASIC TECHNICAL MATHEMATICS with CALCULUS”, 9<sup>th</sup> edition  
by Allyn J. Washington (ISBN-13: 978-0-13-814226-1; ISBN-10: 0-13-814226-2)  
Publisher: Pearson/Prentice Hall**

**Note to Student: The Casio CFX 9850G or any TI series graphing calculator is recommended.**

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<b>SECTIONS</b>	<b>TOPICS</b>	<b>SUGGESTED EXERCISES</b>
<b>CHAPTER 9: VECTORS and OBLIQUE TRIANGLES (≈ 4 hours)</b>		
9.1	Introduction to Vectors	p. 258 #1-47 odd
9.2	Components of Vectors	p. 261 #1-33 odd
9.3	Vector Addition by Components	p. 267 #1-33 odd
9.4	Applications of Vectors	p. 270 #1-33 odd
<b>CHAPTER 12: COMPLEX NUMBERS (≈ 8 hours)</b>		
12.1	Basic Definitions	p. 336 #1-59 odd
12.2	Basic Operations with Complex Numbers	p. 339 #1-59 odd
12.3	Graphical Representation of Complex Numbers	p. 341 #1-33 odd
12.4	Polar Form of a Complex Number	p. 344 #1-43 odd
12.5	Exponential Form of a Complex Number	p. 346 #1-35 odd
12.6	Products, Quotients, Powers, and Roots Of Complex Numbers	p. 352 #1-51 odd
<b>CHAPTER 3: FUNCTIONS and GRAPHS (≈ 4 hours)</b>		
3.1	Introduction to Functions	p. 83 #1-27 odd
3.2	More about Functions	p. 87 #1-47 odd
3.4	The Graph of a Function	p. 94 #7-53 odd
<b>CHAPTER 13: EXPONENTIAL AND LOGARITHMIC FUNCTIONS (≈ 8 hours)</b>		
13.1	Exponential Functions	p. 364 #1-37 odd
13.2	Logarithmic Functions	p. 368 #1-69 odd
13.3	Properties of Logarithms	p. 373 #1-55 odd
13.5*	Natural Logarithms	p. 379 #1-53 odd

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\* The Common Logarithms in Section 13.4 can be reviewed briefly.

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## CHAPTER 10: GRAPHS OF THE TRIGONOMETRIC FUNCTIONS ( $\approx 4$ hours)

10.1	Graphs of $y = a \sin x$ and $y = a \cos x$	p. 291 #1-35 odd
10.2	Graphs of $y = a \sin bx$ and $y = a \cos bx$	p. 294 #1-63 odd
10.3	Graphs of $y = a \sin (bx + c)$ and $y = a \cos (bx + c)$	p. 298 #1-43 odd
10.4	Graphs of $y = \tan x$ , $y = \cot x$ , $y = \sec x$ , $y = \csc x$	p. 301 #1-23 odd
10.5	Applications of the Trigonometric Graphs	p. 303 #1-13 odd

## CHAPTER 20: ADDITIONAL TOPICS IN TRIGONOMETRY ( $\approx 10$ hours)

20.1	Fundamental Trigonometric Identities	p. 531 #7-61 odd
20.2	The Sum and Difference Formulas	p. 536 #1-41 odd
20.3	Double-Angle Formulas	p. 539 #1-49 odd
20.4	Half-Angle Formulas	p. 543 #3-37 odd
20.5	Solving Trigonometric Equations	p. 547 #1-47 odd
20.6	The Inverse Trigonometric Functions	p. 553 #5-61 odd

## CHAPTER 5: SYSTEMS OF LINEAR EQUATIONS; DETERMINANTS ( $\approx 5$ hours)

5.5	Solving Systems of Two Linear Equations in Two Unknowns by Determinants	p. 157 #1-37 odd.
5.6	Solving Systems of Three Linear Equations in Three Unknowns Algebraically	p. 161 #1-19 odd
5.7	Solving Systems of Three Linear Equations in Three Unknowns by Determinants	p. 167 #1-35 odd

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