

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

SYLLABUS: MTH 14 – COLLEGE ALGEBRA and INTRODUCTION TO CALCULUS
(3 credits, 3 hours)

PREREQUISITE: MTH 13

TEXTBOOK: “BASIC TECHNICAL MATHEMATICS with CALCULUS”, 10th edition
by Allyn J. Washington (ISBN-13: 978-0-13-311653-3; ISBN-10: 0-13-311653-0)

Publisher: Pearson/Prentice Hall

Note to student: Any graphic calculator is recommended.

SECTIONS	TOPICS	SUGGESTED EXERCISES
CHAPTER 21 PLANE ANALYTIC GEOMETRY		
21.3	The Circle (review)	p. 578-579/1-43 odd
21.4	The Parabola	p. 582-583/1-39 odd
21.5	The Ellipse	p. 588/1-37 odd
21.6	The Hyperbola	p. 593-594/1-39 odd
21.7	Translation of Axes	p. 597/1-43 odd
CHAPTER 23 THE DERIVATIVE		
23.1	Limits	p. 662-663/1-51 odd
23.2	The Slope of a Tangent to a Curve	p. 666-667/1-25 odd
23.3	The Derivative	p. 670-671/1-37 odd
23.4	The Derivative as an Instantaneous Rate of Change	p. 674-675/1-29 odd
23.5	Derivatives of Polynomials	p. 678-679/1-35 odd; 39
23.6	Derivatives of Products and Quotients of Functions	p. 682-683/1-31 odd; 39,41,43,45,47
23.7	The Derivative of a Power of a Function	p. 688-689/1-23 odd; 29-47 odd
23.8	Differentiation of Implicit Functions	p. 692/1-31 odd.
23.9	Higher Derivatives	p. 695-696/1-39 odd
CHAPTER 24 APPLICATIONS OF THE DERIVATIVE		
24.1	Tangents and Normals	p. 702-703/1-15 odd; 17,21
24.2	Newton's Method for Solving Equations	p. 706/1-13 odd; 21
24.3	Curvilinear Motion	p. 710/1-15 odd; 19, 21
24.4	Related Rates	p. 713-714/1-23 odd
24.5	Using Derivatives in Curve Sketching	p. 720-721/1,5,9,11,13; 31-39odd
24.6	More on Curve Sketching	p. 725/1,5,9,13,17
24.7	Applied Maximum and Minimum Problems	p. 730-731/1-27 odd
24.8	Differentials and Linear Approximation	p. 736/1-15 odd; 25,27,29
CHAPTER 27 DIFFERENTIATION OF TRANSCENDENTAL FUNCTIONS		
27.1	Derivatives of the Sine and Cosine Functions	p. 809-810/1-31 odd;37,38,39,43,51
27.2	Derivatives of the Other Trigonometric Functions	p. 812-813/1-31 odd; 39,41,47
27.3	Derivatives of the Inverse Trigonometric Functions	p. 815-816/1-31 odd
27.4	Applications	p. 819-820/1,7,8,9,11,15,17,19,23
27.5	Derivative of the Logarithmic Function	p. 824/1-31 odd; 39,41,45
27.6	Derivative of the Exponential Function	p. 827/1-31 odd; 35,41,47
27.7	L'Hospital's Rule	p. 831/3-37 odd; 38
27.8	Applications	p. 834/5,11; 17-29/odd;30

PY/GG(11/2000) PY(11/2009)PY(8/2014)