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", 7th edition

by Allyn J. Washington (ISBN: 0-201-35665-1) Publisher: Addison Wesley Longman, Inc.

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

SECTI	ONS TOPICS	SUGGESTED EXERCISES
	TER 21 PLANE ANALYTIC GEOMETRY	557/1 21 - 11 27
21.3	The Circle (review)	p. 557/1-31 odd; 37
21.4	The Parabola	p. 562/1-21 odd; 29,31,33
21.5	The Ellipse	p. 567/1-21 odd; 31,32
21.6 21.7	The Hyperbola Translation of Axes	p. 573/1-23 odd;31,34
21.7	Translation of Axes	p. 576/1-35 odd
CHAPTER 23 THE DERIVATIVE		
23.1	Limits	p. 635/1-43 odd
23.2	The Slope of a Tangent to a Curve	p. 639/1-17 odd;
23.3	The Derivative	p. 643/1-17 odd; 25,27,29
23.4	The Derivative as an Instantaneous Rate of Change	p. 647/1,3,5,9,13,17,21,23,25,27,29
23.5	Derivatives of Polynomials	p. 652/1-35 odd; 39
23.6	Derivatives of Products and Quotients of Functions	p. 656/1-31 odd; 39,41,43,45,47
23.7	The Derivative of a Power of a Function	p. 662/1-23 odd; 29-41 odd
23.8	Differentiation of Implicit Functions	p. 666/1-23 odd; 27,29
23.9	Higher Derivatives	p. 669/1-33 odd; 37,39
CHAPTER 24 APPLICATIONS OF THE DERIVATIVE		
24.1	Tangents and Normals	p. 677/1-15 odd; 17,21
24.2	Newton's Method for Solving Equations	p. 681/1-13 odd; 21
24.3	Curvilinear Motion	p. 685/1-15 odd; 19, 21
24.4	Related Rates	p. 688/1,3,5,9,11,13,15,19,23
24.5	Using Derivatives in Curve Sketching	p. 695/1,5,9,11,13; 31-39odd
24.6	More on Curve Sketching	p. 699/1,5,9,13,17
24.7	Applied Maximum and Minimum Problems	p. 704/1-27 odd
24.8	Differentials and Linear Approximation	p. 710/1-15 odd; 25,27,29
CHAPTER 27 DIFFERENTIATION OF TRANSCENDENTAL FUNCTIONS		
27.1	Derivatives of the Sine and Cosine Functions	p. 782/1-31 odd;37,38,39,43,51
27.1	Derivatives of the Other Trigonometric Functions	p. 786/1-31 odd; 39,41,47
27.3	Derivatives of the Inverse Trigonometric Functions	p. 790/1-31 odd
27.4	Applications	p. 794/1,7,8,9,11,15,17,19,23
27.5	Derivative of the Logarithmic Function	p. 799/1-31 odd; 39,41,45
27.6	Derivative of the Exponential Function	p. 802/1-31 odd; 35,41,47
27.7	Applications	p. 806/13-25 odd; 31
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