Bronx Community College of the City University of New York

Department of Mathematics and Computer Science

SYLLABUS: Math 32  Calculus and Analytic Geometry II (5 credits/ 6 hours per week)

PREREQUISITE: Math 31 or equivalent

TEXT: Calculus (Eighth Edition) by James Stewart, published by Brooks/Cole. ISBN-10: 1285740629

Students who do not need Math 33 may use Single Variable Calculus (Eighth Edition) by

James Stewart, published by Brooks/Cole. ISBN-10: 1305266633

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SECTION TOPIC SUGGESTED EXERCISES

Chapter 5: Applications of Integration

5.1 Areas between Curves pg. 362: 129 odd

5.2 Volumes pg. 374: 133 odd, 54-60

5.3 Volumes by Cylindrical Shells pg. 381: 125 odd

Review pg. 393: 1, 7, 9, 15, 23, 25

Chapter 6: Inverse Functions

6.1 Inverse Functions pg. 406: odd 115, 23-27, 35- 43

Instructor’s option: 6.2-6.4 or 6.2\*-6.4\*

6.2 Exponential Functions and

Their Derivatives pg. 418: 1, 713 odd, 2349 odd, 79-89 odd

6.3 Logarithmic Functions pg. 426: 117 odd, 2735 odd, 47, 49, 51

6.4 Derivatives of Logarithmic Functions pg. 436: 129 odd, 4353 odd, 7181 odd

6.2\* The Natural Logarithmic Function pg. 445: 1-37 odd, 61-73 odd

6.3\* The Natural Exponential Function pg. 452: 5-11 odd, 27-51 odd, 81-91 odd

6.4\* General Logarithmic and Exponential pg. 463: 1-9 odd, 21-41 odd, 45-49 odd

Functions

6.6 Inverse Trigonometric Functions pg. 481: 513 odd, 2335 odd, 43,45,5969 odd

6.7 Hyperbolic Functions pg. 489: 723 odd, 3145 odd, 5967 odd

6.8 Indeterminate Forms and

L'Hospital's Rule pg. 499: 14, 565 odd, 71-74

Review pg. 505: 547 odd, 6377 odd, 93105 odd

Chapter 7: Techniques of Integration

7.1 Integration by Parts pg. 516: 141 odd, 4754

Instructor’s option: 7.4 can be done immediately after 7.1.

7.2 Trigonometric Integrals pg. 524: 131 odd

7.3 Trigonometric Substitution pg. 531: 129 odd

7.4 Integration of Rational Functions pg. 541: 129 odd, 39-49 odd

by Partial Fractions

7.5 Strategy for Integration pg. 547: 159 odd

7.8 Improper Integrals pg. 574: 1, 531 odd, optional 49-54

Review pg. 577: 125 odd, 4149 odd

Chapter 8: Further Applications of Integrals

8.1 Arc Length pg. 588: 117 odd

8.2 Area of a Surface of Revolution pg. 595: 115 odd, 27

Chapter 10: Parametric Equations and Polar Coordinates

10.3 Polar Coordinates pg. 706: 111 odd, 1525 odd 2945 odd

10.4 Areas and lengths in Polar Coordinates pg. 712: 131 odd, optional 45-48

10.5 Conic Sections pg. 720: 147, odd

Section 10.6 is an instructor’s option.

10.6 Conic Sections in Polar Coordinates pg. 728: 115 odd

Review pg. 730: 915 odd, 3139 odd, 4555 odd

Remark: Some elements of sections 10.1 and 10.2 can be discussed as a general introduction to the curves covered in Chapters 8 and 10.

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10/2014 M.M. & I.P. - 08/2016 A.W. - Last updated 01/14/2019