

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 (Seventh Edition) by James Stewart, published by Brooks/Cole.  
Students who do not need Math 33 may use Single Variable Calculus (Seventh Edition) by James Stewart, published by Brooks/Cole.

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<u>SECTION</u>	<u>TOPIC</u>	<u>SUGGESTED EXERCISES</u>
<u>Chapter 5: Applications of Integration</u>		
5.1	Areas between Curves	pg. 349: 1–29 odd
5.2	Volumes	pg. 360: 1–33 odd, 54-60
5.3	Volumes by Cylindrical Shells	pg. 366: 1–25 odd
	Review	pg. 378: 1, 7, 9, 15, 23, 25
<u>Chapter 6: Inverse Functions</u>		
6.1	Inverse Functions	pg. 390: 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. 401: 1, 7–13 odd, 23–49 odd, 79-89 odd
6.3	Logarithmic Functions	pg. 408: 1–17 odd, 27–35 odd, 47, 49, 51
6.4	Derivatives of Logarithmic Functions	pg. 418: 1–29 odd, 43–53 odd, 71–81 odd
6.2*	The Natural Logarithmic Function	pg. 428: 1-37 odd, 61-73 odd
6.3*	The Natural Exponential Function	pg. 434: 5-11 odd, 27-51 odd, 81-91 odd
6.4*	General Logarithmic and Exponential Functions	pg. 444: 1-9 odd, 21-41 odd, 45-49 odd
6.6	Inverse Trigonometric Functions	pg. 459: 5–13 odd, 23–35 odd, 43,45,59–69 odd
6.7	Hyperbolic Functions	pg. 467: 7–23 odd, 31–45 odd, 59–67 odd
6.8	Indeterminate Forms and L'Hospital's Rule	pg. 477: 1–4, 5–65 odd, 71-74
	Review	pg. 481: 5–47 odd, 63–77 odd, 93–105 odd

## Chapter 7: Techniques of Integration

7.1 Integration by Parts pg. 492: 1–41 odd, 47–54

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

7.2 Trigonometric Integrals pg. 500: 1–31 odd

7.3 Trigonometric Substitution pg. 507: 1–29 odd

7.4 Integration of Rational Functions  
by Partial Fractions pg. 516: 1–29 odd, 39–49 odd

7.5 Strategy for Integration pg. 523: 1–59 odd

7.8 Improper Integrals  
Review pg. 551: 1, 5–31 odd, optional 49–54  
pg. 554: 1–25 odd, 41–49 odd

## Chapter 8: Further Applications of Integrals

8.1 Arc Length pg. 567: 1–17 odd

8.2 Area of a Surface of Revolution pg. 574: 1–15 odd, 25

## Chapter 10: Parametric Equations and Polar Coordinates

10.3 Polar Coordinates pg. 686: 1–11 odd, 15–25 odd 29–45 odd

10.4 Areas and lengths in Polar Coordinates pg. 692: 1–31 odd, optional 45–48

10.5 Conic Sections pg. 700: 1–47, odd

Section 10.6 is an instructor's option.

10.6 Conic Sections in Polar Coordinates pg. 708: 1–15 odd

Review pg. 710: 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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