

Text: Calculus with Applications - 9th Edition  
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Office Hours: Mon. – Thurs. 10:45 a.m. – 11:00 a.m., 1:10 p.m. – 2:00 p.m.

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Learning Goal: Students will apply analytical reasoning across academic disciplines.

- Apply quantitative, inductive, and deductive reasoning.
- Apply abstract thinking and conceptual modeling.

Outline : There will be 3 in-class exams and a final exam. The tentative dates for these exams are June 2, June 11, and June 23. The Final Exam is June 24. The highest 2 exams will count 30% each, and the last exam (Final Exam) will count 40%.

Grade:	92-100 A	84-87 B+	77-79 B-	70-73 C	64-66 D+
	88-91 A-	80-83 B	74-76 C+	67-69 C-	60-63 D

Please note: Anyone receiving a grade below 60 will not pass this course (i.e. will receive a grade of F). This includes, but is not limited to, graduating seniors, athletes, and students on scholarships

Plagiarism: Any student caught cheating on an exam or on any assignment will be dealt with in a manner consistent with Hofstra's policy. No such incident will be ignored.

Assignments: [ ] denotes odd numbers only

### Functions

#	Sec.	Page	Problems	Description
1.	1.1	15	[21-37]	Equations of Lines (Write in form $y = mx + b$ )
2.	1.2	28	[19-25], [29-33], 37, 39	Linear Functions
3.	2.1	66	[1-7], [21-77]	Functions: Domains & Ranges
4.	2.2	79	[9-17], [45-51], 62	Quadratic Functions
5.	2.3	92	[7-15], 16-19	Polynomial & Rational Functions
6.	2.4	106	3, 4, 6, 11, [13-25], [33-37]	Exponential Functions
7.	2.5	121	[1-23], [27-35], [41-59], 62, 63, 67 a-c, 69	Logarithmic Functions

## Limits, Continuity, and the Derivative

#	Sec.	Page	Problems	Description
8.	3.1	163	[1-19]	Intuitive Introduction to Limits
9.	3.1	166	[31-49], 57a, 58a	Limit Rules
10.	3.2	175	[1-13], [19-23]	Continuity
11.	3.3	189	[1-15], 23, 27, 29	Rate of Change
12.	3.4	210	[1-23], 33-39	Definition of the Derivative
13.	4.1	248	[1-41], [51-55], 69, 71-73	Techniques of Differentiation – Power Rule
14.	4.2	234	[1-23], 31, 37, 43	The Product Rule and Quotient Rule
15.	4.3	270	[23-41], 45, 47, 57, 63	The Chain Rule - The Generalized Power Rule
16.	4.4	279	[1-27], 37, 39, 40	Derivative of Exponential Functions
17.	4.5	289	[1-29], 55, 56	Derivative of Natural Logarithm

## Applications of the Derivative - Curve Sketching, Maximum & Minimum

#	Sec.	Page	Problems	Description
18.	5.4	355	[3-9]	Curve Sketching - Polynomials
19.	2.3	93	[27-39], 40	Horizontal & Vertical Asymptotes
20.	5.4	355	[11-19], 35	Curve Sketching - Rational Functions
21.	5.4	355	21, 23, 25, 27, 28	Curve Sketching - Exponentials and Log's
22.	6.1	372	[1-19], [31-35], 43, 45, 51, 55	Absolute Max. & Min.

## The Integral & Area

#	Sec.	Page	Problems	Description
23.	7.1	438	[5-39], [43-57], 65-69	Antiderivatives
24.	7.4	471	[1-5], 9, 11, 15-19, [31-43]	The Definite Integral & Area Under a Curve
25.	7.5	483	[1-15]	Area Between Two Curves