

Math 250 TR Applied Calculus

Text: *Applied Calculus*, 4th edition, Hughes-Hallet, Gleason, Lock, Flath, *et al.*, Wiley, 2010

Prerequisites: Math 100/105 or Math 140/143 with a grade of “C” or better. **A graphing calculator is required.**

Our textbook concentrates on the most important topics of calculus with emphasis on the graphical and numerical representation of functions and other relations as well as the traditional use of symbolic formulas. The materials in our text are meant to be read thoroughly and carefully. The writing is plain and straightforward. Please include reading tomorrow’s section in your assignment every day. The authors include several types of in-depth problems designed to develop conceptual understanding, rather than routine “drill” examples. The aim is to have you understand and apply the concepts, rather than mimic examples from the textbook. In this course, a graphing calculator is required for visualization and numerical computation.

Lesson	Section and Topic	Assignment
1	1.1 What Is a Function?	3, 5, 8, 9, 12, 14, 15, 19, 22, 23
	1.2 Linear Functions	3, 9, 10, 11, 14, 15, 20
2	1.2 Linear Functions (cont.)	21, 22, 24, 25, 28, 29, 30
	1.3 Average Rate of Change & Relative Change	1, 3, 5, 7, 8, 13, 15, 17, 18, 25-28, 31, 32, 41-43
3	1.4 Applications of Functions to Economics	1, 3, 6, 7, 11, 12, 13, 15, 19, 22, 23, 24, 29, 30, 32
	1.5 Exponential Functions	1, 2, 5-9, 11, 14, 20, 21, 30
4	1.6 The Natural Logarithm	6, 10, 11, 14, 17, 19, 21, 22, 23, 29, 31, 32, 35, 39, 40
	1.7 Exponential Growth and Decay	1, 5, 6, 7, 8, 11, 13, 14, 16, 19, 20-23, 29
5	1.8 New Functions from Old	1, 3, 5, 9, 11, 15, 16, 19, 21, 22, 25, 27
	1.9 Proportionality and Power Functions	1, 3, 5, 9, 11, 13, 18, 23, 25, 30
6	Review	
	2.1 Instantaneous Rate of Change	1-7, 10, 12, 13, 15, 16, 18, 19, 21, 22
7	TEST 1	Sections 1.1-1.9
8	2.2 The Derivative Function	1, 2, 5, 6, 10, 11, 14, 16, 17, 21-25
	2.3 Interpretations of the Derivative	3, 5, 7, 13, 16, 21, 22, 25, 27, 30, 33, 34, 37, 38, 39, 43
9	2.4 The Second Derivative	1, 2, 3, 5, 7, 11, 12, 16, 17, 19, 20, 22, 23
	2.5 Marginal Cost and Revenue	1, 2, 3, 5-7, 9, 11, 12, 13, 14
10	Review	
	3.1 Derivative Formulas for Powers and Polynomials	1, 5, 9, 16, 19, 21, 23, 25, 27, 29, 33, 38, 42, 43, 45, 49, 51, 52, 54, 55, 58, 59, 61
11	TEST 2	Sections 2.1-2.5
12	3.2 Exponential and Logarithmic Functions	1, 5, 15, 17, 23, 25, 27, 30, 32, 33, 35, 36, 42, 47, 49
	3.3 The Chain Rule	5, 7, 9, 11, 13, 17, 21, 25, 27, 39, 40, 44, 46
13	3.4 Product and Quotient Rules	3, 7, 11, 13-15, 17, 19, 23, 25, 27, 31, 35-37, 40, 41
14	Focus on Practice p.168	5, 9, 10, 13-15, 21, 22, 31, 32, 36-38, 41, 42, 44, 47, 48, 52, 53, 55, 56
	4.1 Local Maxima and Minima	3, 4, 6, 8, 9, 13, 14, 16, 17, 18, 22, 23, 25
15	4.2 Inflection Points	2, 3, 5, 6, 7, 8, 17, 19, 21, 23, 25, 30, 35
	4.3 Global Maxima and Minima	2-5, 13, 14, 16, 18, 25-27, 31, 32, 36, 40
16	4.4 Profit, Cost, and Revenue	1, 4-7, 9, 11, 12, 15, 16, 18, 19
	4.5 Average Cost	2-5, 7, 9, 10
17	Review	
	5.1 Distance and Accumulated Change	2-9, 11, 13, 14, 17, 18
18	TEST 3	Sections 3.1-3.4, 4.1-4.5

Lesson	Section and Topic	Assignment
19	5.2 The Definite Integral	1-7, 11, 13-18, 21, 24, 25, 27, 28
20	5.3 The Definite Integral as Area	1-18, 20, 21, 23, 29, 32
21	5.4 Interpretations of the Definite Integral	1, 3, 5, 7-10, 13, 15, 19, 20, 21, 25, 33
	5.5 The Fundamental Theorem of Calculus	1-6, 9, 11, 13
22	6.1 Average Value	2-4, 6-8, 13, 14, 16, 19, 20
	6.3 Present and Future Value	1, 3, 5, 6, 10, 13
23	7.1 Constructing Antiderivatives Analytically	3, 7, 9, 15, 17, 19, 23, 27, 32, 35, 39, 43, 49, 51, 55, 63, 64, 66, 67
24	7.3 Using the Fundamental Theorem to Find Definite Integrals	2, 6, 10, 13, 26, 27, 29, 30, 34
	7.4 Analyzing Antiderivatives Graphically and Numerically	1, 4, 5, 7, 8, 14, 16-19
25	Review	
26	TEST 4	
27	Review for final	

Emergency Evacuation Procedure: A map of this floor is posted near the elevator marking the evacuation route and the **Designated Rescue Area**. This is an area where emergency service personnel will go first to look for individuals who need assistance in exiting the building. Students who may need assistance should identify themselves to the teaching faculty.

Last updated 3 August 2010.