Math 250 MWF
Applied Calculus

Text: *Applied Calculus*, 5th edition, Hughes-Hallet, Gleason, Lock, Flath, *et al.*, Wiley, 2014

Prerequisites: Math 103/104 or Math 105 or Math 143 or Math 109 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?	6, 7, 11, 12, 15, 20, 23, 24, 29, 31
2	1.2 Linear Functions	7, 9, 10, 11, 13, 17, 19, 20, 21, 22, 24, 27, 28, 29
3	1.3 Average Rate of Change & Relative Change	1, 3, 9, 12, 13, 14, 20, 22, 23, 24, 27, 28, 34, 43, 44
4	1.4 Applications of Functions to Economics	2, 3, 4, 8, 9, 10, 19, 21, 22, 25, 27, 28, 33, 34, 35
5	1.5 Exponential Functions	1, 2, 6, 8-12, 14, 25, 26, 35
6	1.6 The Natural Logarithm	6, 10, 11, 14, 17, 19, 21, 27, 32, 34, 35, 36, 39, 40, 43
7	1.7 Exponential Growth and Decay	1, 3, 6, 7, 8, 10, 13, 14, 16, 19-23, 28
8	1.8 New Functions from Old	2, 5, 7, 9, 12, 16, 17, 20, 24, 30, 33, 35
9	1.9 Proportionality, and Power Functions	2, 3, 5, 7, 12, 13, 14, 18, 23, 25, 29
10	REVIEW	
	2.1 Instantaneous Rate of Change	1, 2, 3-6, 8, 10, 12, 13, 14, 16, 17, 18
11	TEST 1	Sections 1.1-1.9
12	2.2 The Derivative Function	1, 4, 5, 7, 9, 12, 13, 14, 16, 18-21, 24
13	2.3 Interpretations of the Derivative	4, 6, 7, 14, 17, 22, 24, 25, 28, 31, 34-38, 47
14	2.4 The Second Derivative	1, 2, 4, 6, 8, 10, 11, 13, 14, 19, 20, 21, 23
15	2.5 Marginal Cost and Revenue	1-4, 6, 7, 9, 11-14
16	REVIEW	
	3.1 Derivative Formulas for Powers and Polynomials	2, 6, 10, 15, 17, 19, 25, 27, 29, 31, 36, 40, 47, 48, 49, 51, 53, 56, 58, 60, 64-66
17	TEST 2	Sections 2.1-2.5
18	3.2 Exponential and Logarithmic Functions	1, 9, 15, 17, 25, 26, 28, 36, 38, 39, 41
19	3.3 The Chain Rule	3, 8, 9, 11, 13, 17, 21, 25, 27, 34, 36, 43, 45
20	3.4 Product and Quotient Rules	4, 7, 11-13, 15, 17, 19, 22, 23, 25, 29, 34-36, 38, 39
21	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
22	4.1 Local Maxima and Minima	3, 4, 7, 11, 12, 20, 21, 23-28, 31, 40
23	4.2 Inflection Points	1, 4-8, 11, 17, 19, 26, 29, 30, 36
24	4.3 Global Maxima and Minima	2-5, 15, 16, 20, 22, 29-31, 34, 39, 42
25	4.4 Profit, Cost, and Revenue	1, 5, 7, 9-11, 14-16, 18, 28
26	4.5 Average Cost	2-5, 7, 9, 10
27	REVIEW	

Lesson	Section and Topic	Assignment
28	TEST 3	Sections 3.1-3.4, 4.1-4.5
29	5.1 Distance and Accumulated Change	4-6, 7, 9-15, 18, 20
30	5.2 The Definite Integra	3, 4, 6-10, 15, 18-22, 27-29, 31
31	5.3 The Definite Integral as Area	1, 2-7, 9-19, 24, 27, 30
32	5.4 Interpretations of the Definite Integral	1, 3, 5, 8, 9, 15, 17, 18, 21, 22, 24, 28
33	5.5 Total Change and The Fundamental Theorem of Calculus	1-5, 7, 9, 11, 14, 15
34	5.6 Average Value	2-4, 7-9, 12, 15, 16, 20, 21
35	6.1 Analyzing Antiderivatives Graphically and Numerically	4, 7, 10, 11, 17, 21-23
36	6.2 Antiderivatives and The Indefinite Integral	16, 21, 22, 28, 29, 31, 36, 44, 49, 51, 59, 60, 65, 67, 71, 86-90
37	6.3 Using The Fundamental Theorem to Find Definite Integrals	1, 6, 7, 11, 21, 22, 24, 26
38	6.5 Present and Future Value	2, 3, 9, 10, 15, 18
39	REVIEW	
40	TEST 4	Sections 5.1-5.6, 6.1-6.3,6.5
41	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 20 August 2014.