

## Syllabus for MTH 228

**Textbook:** Calculus by L. D. Hoffmann and G. L. Bradley, 10<sup>th</sup> ed. McGraw Hill

**Calculator:** a graphing calculator such as the TI-83 is required for this course. *Calculators that can compute derivatives (for example, the TI-89) cannot be used in this course.*

This course has been divided into 45 lectures, each lesson being a section or part of a section of text with pertinent examples. It is suggested that the instructor introduce a lesson per day (the remaining days are for review or tests), but an instructor may choose to introduce two lessons some days or spend two days on one lesson.

Day	Section	Part	Suggested Homework Problems
1	1.1 (Functions)	all Ex	9, 14, 21, 22, 29, 32, 35, 36, 43, 51, 55, 63, 64, 65, 66, 67, 70, 75
2	1.2 (Graphs of Functions)	all Ex	11, 19, 27, 31, 32, 37, 42, 43, 45, 51
3	1.3 (Linear Functions)	all Ex	1, 5, 13, 14, 16, 17, 22, 25, 28, 33, 35, 40, 43, 44, 52, 53, 55
4	1.4 (Modeling w/Functions)	thru Ex 1.4.3	3, 4, 5, 8, 11, 30, 37, 38
5	1.4	Ex.1.4.5 thru 1.4.8	40, 41, 42, 43, 49, 52, 54
6	1.5 (Limits)	thru Ex 1.5.4	1, 3, 4, 5, 7, 11, 12, 13, 15, 16
7	1.5	the rest	17, 20, 22, 23, 27, 31, 32, 34, 35, 37, 39, 40
8	1.6 (Continuity)	thru Ex 1.6.8	1, 4, 7, 10, 15, 18, 20, 21, 27, 30, 35, 38
9	2.1 (Limit Definition of Derivative)	thru 2.1.4	3, 5, 6, 9, 18, 19
10	2.1	the rest	30, 33, 34, 46, 54
11	2.2 (Rate of Change)	thru Ex 2.2.6	9, 12, 13, 14, 17, 18, 21, 22, 24, 25, 29, 32
12	2.2	the rest	35, 40, 45, 51, 52, 53, 58, 61, 63
13	2.3 (Product/Quotient Rules)	thru Ex 2.3.6	1, 4, 8, 11, 22, 23, 27, 32, 35, 41
14	2.3	the rest	43, 44, 49, 56, 61, 65, 66
15	2.4 (The Chain Rule)	thru Ex 2.4.5	3, 6, 16, 17, 19, 23, 24, 25, 28, 29, 30
16	2.4	thru Ex 2.4.9	31, 33, 35, 36, 37, 38, 39, 47, 51
17	2.4	the rest	61, 62, 65, 66, 67, 69, 74
18	2.5 (Marginal Analysis)	thru Ex 2.5.5	3, 12, 13, 15, 16, 17, 18, 19, 24, 25

19	3.1 (Increasing & Decreasing Functions)	thru Ex 3.1.3	1, 2, 3, 5, 6, 12, 13, 19, 23, 26
20	3.1	the rest	35, 36, 43, 49, 50, 70, 71
21	3.2 (Concavity)	thru Ex 3.2.2	1, 2, 7, 8, 11, 39, 42
22	3.2	thru Ex 3.2.4	15, 16, 19, 21, 45, 46
23	3.2	the rest	27, 28, 29, 30, 31, 49, 50, 51
24	3.3 (Limits & Asymptotes)	thru Ex 3.3.2	1, 3, 5, 8, 9, 12, 13, 14
25	3.3	thru Ex 3.3.5	17, 23, 24, 26, 33, 34
26	3.4 (Optimization)	thru Ex 3.4.3	3, 5, 6, 7, 8, 9
27	3.4	thru Ex 3.4.5	11, 12, 15, 29, 33, 34, 36
28	3.5 (Additional Applied Optimization)	thru Ex 3.5.3	1, 5, 6, 7, 8
29	3.5	thru Ex 3.5.5	9, 12, 17, 18, 23
30	3.5	the rest	28, 31, 33, 36, 39
31	4.1 (Exponential Functions; Continuous Compounding)	all Ex	1, 3, 5, 10, 11, 13, 16, 35, 38, 43, 65
32	4.2 (Logarithmic Functions)	thru Ex 4.2.8	1, 4, 5, 7, 9, 11, 23, 24, 27, 30, 31, 36
33	4.2	the rest	37, 44, 45, 53, 54, 55, 56
34	4.3 (Differentiation of Exponential & Logarithmic Functions)	thru Ex 4.3.9	2, 3, 5, 8, 9, 13, 15, 18, 19, 21, 24
35	4.3	thru Ex 4.3.11	40, 48, 53, 54, 73, 74, 75, 77
36	4.4 (Applications; Exponential Models)	thru 4.4.5	2, 7, 11, 12, 14, 18,
37	4.4	the rest	21, 22, 23, 26, 29, 33
38	5.1 (Antiderivatives)	thru Ex 5.1.3	5, 10, 13, 14, 15, 16, 19, 23, 25, 27
39	5.1	the rest	39, 40, 43, 48, 51, 53, 58, 62
40	5.2 (Integration by Substitution)	thru Ex 5.2.6	1, 5, 7, 9, 11, 12, 14, 15, 21, 22, 23
41	5.2	the rest	25, 26, 45, 46, 51, 52, 53
42	5.3 (Fundamental Theorem of Calculus)	Ex 5.3.4 thru 5.3.8	5, 7, 14, 15, 17, 21, 22, 27, 28, 29
43	5.3	Ex 5.3.1 thru 5.3.3	39, 40, 41, 43, 45, 46
44	5.3	Ex 5.3.9 thru 5.3.10	51, 53, 54, 55, 61, 63
45	5.4 (Area between Curves)	thru Ex 5.4.2	1, 4, 5, 6, 9, 11, 12, 17