

MATH 301: Calculus II

Text: *Calculus Early Transcendentals, 11th edition*, Anton, Bivens, and Davis, Wiley, 2015

Prerequisite: Math 270 with a grade of “C” or better.

A TI-83 or TI-84 Graphing Calculator is required.

Day	Section/Topic	Supplemental Exercises
1-3	Introduction and Review from Calculus I	(e.g. Both FTC, substitution, antiderivative rules, etc.)
4	6.1 Area Between Two Curves	2, 4, 8, 12, 15, 17, 25, 31, 37, 45, 46, 47, 48
5	6.2 Volumes by Slicing; Disks and Washers	2, 4, 5, 10, 16, 20, 23, 33, 37, 38, 42, 45, 48
6	6.3 Volumes by Cylindrical Shells	2, 4, 10, 14, 25, 27, 28
7	6.4 Length of a Plane Curve	2, 3, 15, 16, 17, 19, 23, 28, 29
8, 9	6.6 Work	1, 2, 3, 5, 8, 11, 17, 18, 19, 21
10, 11	6.7 Moments, Center of Gravity, and Centroids	1, 2, 7, 8, 10, 16, 26, 27, 28
12	6.8 Fluid Pressure and Force	2, 4, 5, 6, 8, 10, 15, 17
13	6.9 Hyperbolic Functions	1, 3, 5, 8, 9, 10, 16, 17, 18, 30, 31, 33, 53, 71, 72
14	Review	
15	Exam 1	
16	7.1 Overview of Integration Methods	3, 6, 8, 11, 15, 22, 30
17, 18	7.2 Integration by Parts	4, 8, 9, 15, 17, 20, 29, 49
19	7.3 Integrating Trigonometric Functions	1, 3, 10, 13, 17, 25, 31, 40, 48
20, 21	7.4 Trigonometric Substitution	1, 3, 5, 7, 9, 13, 19, 23, 39, 41
22, 23	7.5 Integration using Partial Fractions	1, 3, 8, 10, 13, 19, 21, 26, 31
24	7.6 Using Tables of Integrals and C.A.S.	1, 3, 7, 10, 12, 13, 15, 19, 23, 25, 27, 31
25	7.7 Numerical Integration	2, 3, 6, 8, 12, 14, 19 – 22, 25, 29, 46
26, 27	7.8 Improper Integrals	1, 2, 5, 7, 9, 13, 15, 16, 27, 29
28	Review	
29	Exam 2	
30	9.1 Sequences	9.1: 1, 3, 5, 7, 8, 11, 15, 22, 24, 27, 37
31	9.2 Monotone Sequences	9.2: 1, 2, 4, 7, 17, 18, 19, 23, 29, 30
32	9.3 Infinite Series	1, 2, 3, 4, 6, 7, 8, 13, 15, 19, 23, 27, 29, 31,
33, 34	9.4 Convergence Tests	1, 2, 4, 5, 8, 12, 13, 18, 19, 29, 34
35, 36	9.5 Comparison, Ratio, & Root Tests	2, 3, 4, 5, 7, 11, 12, 17, 20, 28, 31, 34, 39, 42, 47

37	9.6 Alternating Series; Absolute Convergence	1, 6, 7, 11, 12, 14, 17, 27, 43, 45
38	Review	
39	Exam 3	
40, 41	9.7 Maclaurin and Taylor Polynomials	1, 3, 5, 8, 10, 11, 12, 17, 20, 21, 23, 27, 43
42	9.8 Maclaurin and Taylor Series; Power Series	1 – 29 (odd), 18, 20, 30, 33, 39, 41, 42, 43
43	9.9 Convergence of Taylor Series	1, 2, 3, 5, 6
44, 45	9.10 Differentiating and Integrating Power Series	1, 2, 3, 5, 7, 9, 13, 15, 21, 22, 23, 24, 31, 33
46	10.1 Parametric Equations	3, 5, 7, 7, 13, 14, 15, 16, 23, 24, 26, 40, 45, 47, 48 53, 65, 67, 69
47	10.2 Polar Coordinates	1 – 6, 9, 10, 11, 12, 13, 15, 21, 23, 25, 29, 41
48, 49	10.3 Tangent Lines, Arc Length, and Area in Polar Coordinates	1, 2, 3, 5, 7, 13, 17, 19, 20, 21, 25, 28, 29, 31, 33, 39, 40, 43, 45, 51
50	Review	
51	Exam 4	
52	Review for final Exam	

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 6 September 2017.