

**Math 143**  
**PreCalculus Algebra and Trigonometry**

**Text:** *Functions Modeling Change*, 4th edition, Connally, Hughes-Hallett, Gleason, et al., Wiley 2011.

**Prerequisites:** Minimum ACT math score of 26, department exam or Math 100 or Math 105 with a grade of C or better.

**A Graphing calculator is required.** A TI-83+, TI-84, TI-86, TI-89, or better is strongly recommended.

Topic	Section	Assignment
1	1.1 Functions	S1-S8 / 2,3,5,7,11-14,18 / 20,22,25-28,31-33
2	1.2 Rate of Change	S1-S4,S6-S9 / 4-8,12 / 16,20-25
3	1.3 Linear Functions	S1-S8 / 1,2,4-6,9-12 / 15-18,22,24,27,28,31,32
4	1.4 Formulas for Linear Fns	S3-S8 / 2,5,7,12,14,15,18-20,29,30 / 38,39,42,47,50
5	1.5 Geom. Prop. Of Lin. Fns.	S1-S4, S7-S8 / 2,3,7,10,11 / 17,19,20,24,25,29,32
6	1.6 Fitting Lin. Fns. To Data	7,9,10,11
7	2.1 Input and Output	S1-S4, S7-S9 / 2,3,6,8-11 / 16-22,25,26,33
8	2.2 Domain and Range	S1-S3,S5-S9 / 4,6,9,11,16-18 / 21-26,29,32,33
9	2.3 Piecewise Defined Fns	S1-S10 / 1,3-5,7,9 / 11-16
10	2.4 Composite and Inverse Fns	S2-S5,S7-S10 / 2-5,15,17,20 / 22,24,25,27,28,30,36,37,39,50
11	3.1 Quadratic Fns	S1-S5,S7-S10 / 2,5,7,10,12,17,18 / 22,24,25,29,30,32,34
12	3.2 Vertex of Parabola	S1-S2,S5-S6,S9-S10 / 1,2,5-7,9,11-14,17 / 23,25,28-31
13	REVIEW: Chapter 1	6,8,9,19-22 / 25,34,42,46
	REVIEW: Chapter 2	10,12,13,18,20,27,28,31,32,40,41,46 / 53,56,58,60,65,68
	REVIEW: Chapter 3	5,6,8,9,13-17,19-21 / 23,26,32,33
14	TEST 1	
15	4.1 Exponential Fns	S1-S4 / 1,2,4,7,10,12,15,16, / 18,21-23,26,28,30,31,34,48,56,57
16	4.2 Comparing Exp. And Lin. Fns	S1-S4, S7, S10 / 3,4,10,12,13,25 / 31,32,36,39,41,42
17	4.3 Graphs of Exp. Fns	3,4,11-14,16,17,20-22 / 23-26,31,33,34,37,38,41,43,45
18	4.4 Apps. To Compound Int.	2,5,9 / 15,16,18-20
19	4.5 The Number e	S1,S2, S7-S11 / 3,5 / 9,11-13,26,30,32,41,42,47-49
20	5.1 Logs and their Properties	S1-S8 / 1,3,7,8,11,12,15,18 / 24,28-31,34,41,43,47-50
21	5.2 Logs and Exponential Models	S5-S10 / 6,8,9,11,14-16 / 21,22,25,27,30,33,40,42,49,51,53,56,57
22	5.3 The Log Function	S3-S6 / 5-10,12 / 20-22,27,34,37,39
23	REVIEW: Chapter 4	1-6,8,11,14 / 17,27-29,35,37,39,42,53,55,75
	REVIEW: Chapter 5	1-4,7,9,11,15,22-24 / 38-40,48-50,53,55,62
24	TEST 2	
25	6.1 Vertical and Horizontal Shifts	S9-S10 / 1-4,7-11,14,15,19,22,25, / 27,31-33,38,47-49,52,55
26	6.2 Reflections and Symmetry	S5-S8 / 1-4,11,17,18,21,23-25 / 30,33-36,40,45,46
27	6.3 Vert. Stretches and Compressions	S3-S4 / 1-3,8,12,20 / 21-23,25,26,28-30,35,36,38-40,42,44
28	6.4 Hor. Stretches and Compressions	S1-S4 / 1,2,4,6,7,10 / 12,13,15,16,20-22,25-27
29	7.1 Periodic Fns	1-4,6-9 / 14,15,17,19-21,23,25-28
30	7.2 Sine and Cosine Fns	1-10 / 11-14,16,17,19,21-24
31	7.3 Graphs of Sine and Cosine Fns	1-3,5-7,11-13,15-21 / 23-25,31-34,36,38
32	7.4 Tangent Fn	1-5,8,9,11,12,15-23 / 24-27,29
33	7.5 Right Triangles, Inverses	1,3,5,9-13,15-23 / 25,26,29,30,33,36,38-41,43
34	7.6 Non-Right Triangles	1,2,9,12,14,17,20,23,24,26-28,30,31 / 32,33,35-38,43,44
35	REVIEW: Chapter 6	3-10,12 / 15,18,19,24,26,30,33,34,36-38
	REVIEW: Chapter 7	9,10,11,13,14,16-24 / 31,32,37-41,45,46
36	TEST 3	

Topic	Section	Assignment
37	8.1 Radians and Arc Length	1,3,6-15,17-22 / 26,27,29-32,34,37-39,41,45,47,48
38	8.2 Sinusoidal Fns	1-3,6-8,12-16 / 17,18,21-29,31-33,35,36,38-40,43
39	8.3 Trigonometric Fns	1-11,13-15,17 / 18,19,22-25,27,28,30-33,37,38
40	8.4 Trigonometric Equations	3,5,6 / 11,12,15,17-20,23-25,27,30,33-39,41,43-50,52,55
41	8.5 Polar Coordinates	1-21 / 22-27
42	8.6 Complex Numbers	7-10,12
43	9.1 Identities, Expressions, Equations	1,2,4,6-8,18 / 22-24,26,27,31-33,37,39,41,49-51
44	9.2 Sum and Difference Formulas	5-10 / 18
45	REVIEW: Chapter 8 REVIEW: Chapter 9	1,2,5,6,8,9,12,17,25-27 / 29,31,33,36,39,40,47,49,63,66,70,71 1-7,9-11 / 15,21,22,24
46	TEST 4	
47	10.1 Composition of Fns	1-3,5,6,9-12,17,18 / 19,21,22,24-26,30,32-37,39,40,43,44,46,49,54,55,57,58,64
48	10.2 Invertibility	1,4-7,9-11,14,19-21,26-28,30,31 / 36,38-42,47,48,55,59,60
49	10.3 Combinations of Fns	2,6,7,9-11,14,16,19-21 / 23-25,35-37,42,45
50	11.1 Power Fns	S1-S10 / 1,4,5,9,12,15,17,18,22,25,26 / 38,41-43,46,47
51	11.2 Polynomial Fns	1,2,4,5,7,8,10 / 11,12,18,20-23,25-27,30,31
52	11.3 Short-Run Behavior of Poly.	2,3,5,6,8,10 / 12,13,15,17-20,23,26,27,33-35,41
53	11.4 Rational Fns	S1-S4, S9 / 2,3,5,10,11,14,15 / 16,18,19,26
54	11.5 Short-Run Behavior of Rat. Fns	1-5,7,8 / 11,13-16,22,23,33,36,42,43
55	12.1 Vectors	2,3,4,9,10,12,14 / 16-20,24
56	12.2 Components of a Vector	5,6,8,9 / 14,15,17-19,25,26,30,31
57	12.3 Applications of Vectors	2,4,9,10,12 / 13-15,17,19
58	REVIEW: Chapter 10 REVIEW: Chapter 11 REVIEW: Chapter 12	2-6,11,13,15,21,23,24,27,28,37 / 51,57-59,67-69,73-76,81 9-13,18-20,29 / 33,35,36,41,42,45,48,49,51,54,55,57,64,65 1,4,5,7,9,10 / 23,28
59	TEST 5	
60	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 20 August 2011.