

ENGR 51 Dynamics

Fall 2007

Tentative Calendar (subject to change) for 7th edition of the Textbook

Week	Date	Topic (Lecture Number)	Reading	Homework
1	8/21	Introduction to Dynamics (11-1), Kinematics of particles in rectilinear motion (11-2, 11-2E)	11.1-5, Appendix A	#1 due 8/28 11: 19, 28, 46, 53, 105, 124, 131
	8/23	Kinematics of particle system (11-3, 11-3E), Curvilinear motion in rectangular coordinates (11-4, 11-4E)	11.6, 11.9-12	
2	<u>8/28</u>	Curvilinear motion in other coordinates (11-5, 11-5E, 11-5E2)	11.13-14	#2 due 9/6 11: 141, 168
	8/30	Kinetics of particle: FMA method (12-1, 12-1E, 12-1E2, 12-1E3)	12.1-6	12: 9, 30, 36, 70
3	9/4	Angular momentum (12-2, 12-2E, 12-2E2)	12.7-10	
	<u>9/6</u>	Work, Kinetic Energy, and power (13-1, 13-2, 13-2E, 13-2E2)	13.1-4	#3 due 9/18
4	9/11	Test 1(11-12)		13: 12, 19, 25, 70, 75, 67
	9/13	Potential energy (13-3, 13-3E)	13.5-8	
5	<u>9/18</u>	Impulse and momentum(13-4, 13-4E, 13-4E2)	13.10-11	#4 due 9/27
	<u>9/20</u>	Impact (13-5, 13-6, 13-6E, 13-7, 13-7E)	13.12-15	13: 126, 147 [#] , 156, 173
6	9/25	Particle systems Kinetics (14-1, 14-1E, 14-2, 14-2E, 14-2E2)	14.1-9	14: 6, 21, 32, 43
	<u>9/27</u>	Rigid body translation and rotation (15-1, 15-2)	15.1-5	#5 due 10/9
7	10/2	Test 2(13-14)		15: 10, 21, 40, 50, 57, 64, 69
	10/4	Relative velocity (15-3, 15-3E, 15-3E2)	15.6	
8	<u>10/9</u>	Instant center (15-4, 15-4E, 15-4E2)	15.7	#6 due 10/18
	10/11	<i>No Class -- Flex Day</i>		15: 77, 83, 95, 113, 115, 117
9	10/16	Relative acceleration (15-5, 15-5E, 15-5E2, 15-5E3)	15.8-9	
	<u>10/18</u>	Rotating reference frame (15-6, 15-6C)	15.10-11	#7 due 10/25
10	10/23	Rotating reference frame (15-6E, 15-6E2)		15:171, 179, 180, 152
	<u>10/25</u>	Mass moment of inertia (16-1, 16-2, 16-2E)	Appendix B.1-B.5	#8 due 11/6
11	10/30	Test 3(15.1-15.11)		B: 4 16: 5, 14 [#] , 37, 60, 69
	11/1	FMA in rigid bodies (16-3, 16-3E, 16-3E2, 16-3E3)	16.1-7	
12	<u>11/6</u>	Constrained plane motion (16-4, 16-4E, 16-4E2, 16-4E3, 16-4E4)	16.8	#9 due 11/8 16: 81, 100, 96, 117
	<u>11/8</u>	Work and Energy in rigid bodies (17- 1, 17-1E, 17-1E2)	17.1-7	#10 due 11/15
13	11/13	Work and energy in rigid bodies (17-1E3, 17-1E4)		17: 12, 18, 22, 33, 37
	<u>11/15</u>	Impulse and Momentum in rigid bodies (17-2, 17-2E, 17-2E2, 17-2E3)	17.8-10	#11 due 11/20 17: 61, 66, 79, 84
14	<u>11/20</u>	Rigid bodies impact (17-3, 17-3E)	17.11-12	#12 due 12/4
	11/22	<i>No Class – Thanksgiving</i>		17: 90, 97, 103, 105
15	11/27	Test 4(16-17.10)		
	11/29	Impact (17-3E2)		
16	<u>12/4</u>	3-D kinematics (15-7, 15-7E, 15-7E2)	15.12-15,	#13 due 12/11
	12/6	3-D kinetics (18-1, 18-1E, 18-2, 18-2E)	B.6-8, 18.1-4	15: 187, 193, 238 18: 6, 21, 44
17	<u>12/11</u>	3-D kinetics FMA (18-3)	18.5-8	
	12/13	Review		
18	12/18	Final Exam 4:30-6:30pm		

Notes: Weekly assignments are due every Thursday, except A8 due 10/16 and none due 11/22.

behind homework problems means that the numbers and units will not match the solution, but the method will be the same.