

ENGR 51 Dynamics

Spring 2008

Tentative Calendar (subject to change) for 8th edition of the Textbook

Week	Date	Topic (Lecture Number)	Reading	Homework
1	1/22	Introduction to Dynamics (11-1), Kinematics of particles in rectilinear motion (11-2, 11-2E)	11.1-5, Appendix A	#1 due 1/29 11: 20, 30, 48, 55, 109, 126, 133
	1/24	Kinematics of particle system (11-3, 11-3E), Curvilinear motion in rectangular coordinates (11-4, 11-4E)	11.6, 11.9-12	
2	<u>1/29</u>	Curvilinear motion in other coordinates (11-5, 11-5E, 11-5E2)	11.13-14	#2 due 2/7 11: 143, 170 12: 10, 126, 38, 72
	1/31	Kinetics of particle: FMA method (12-1, 12-1E, 12-1E2, 12-1E3)	12.1-6	
3	2/5	Angular momentum (12-2, 12-2E, 12-2E2)	12.7-10	
	<u>2/7</u>	Work, Kinetic Energy, and power (13-1, 13-2, 13-2E, 13-2E2)	13.1-4	#3 due 2/19 13: 14, 21, 27, 69, 73, 193
4	2/12	Test 1(11-12)		
	2/14	Potential energy (13-3, 13-3E)	13.5-8	
5	<u>2/19</u>	Impulse and momentum(13-4, 13-4E, 13-4E2)	13.10-11	#4 due 2/28 13: 121, 146, 155, 172 14: 5, 22, 31, 41
	2/21	Impact (13-5, 13-6, 13-6E, 13-7, 13-7E)	13.12-15	
6	2/26	Particle systems Kinetics (14-1, 14-1E, 14-2, 14-2E, 14-2E2)	14.1-9	#5 due 3/11 15: 12, 17, 45, 48, 61, 63, 70
	<u>2/28</u>	Rigid body translation and rotation (15-1, 15-2)	15.1-5	
7	3/4	Test 2(13-14)		
	3/6	Relative velocity (15-3, 15-3E, 15-3E2)	15.6	#6 due 3/18 15: 78, 84, 96, 112, 113, 121
8	<u>3/11</u>	Instant center (15-4, 15-4E, 15-4E2)	15.7	
	3/13	Relative acceleration (15-5, 15-5E, 15-5E2, 15-5E3)	15.8-9	#7 due 4/1 15:170, 176, 177, 251
9	<u>3/18</u>	Rotating reference frame (15-6, 15-6C)	15.10-11	
	3/20	Rotating reference frame (15-6E, 15-6E2)		
10	3/25	<i>No Class – Spring Break</i>		
	3/27	<i>No Class – Spring Break</i>		
11	<u>4/1</u>	Mass moment of inertia (16-1, 16-2, 16-2E)	Appendix B.1-B.5	#8 due 4/10 B: Download* 16: 6, 11, 39, 59, 69
	4/3	FMA in rigid bodies (16-3, 16-3E, 16-3E2, 16-3E3)	16.1-7	
12	4/8	Test 3(15.1-15.11)		#9 due 4/15 16: 80, 96, 100, 123
	<u>4/10</u>	Constrained plane motion (16-4, 16-4E, 16-4E2, 16-4E3, 16-4E4)	16.8	
13	<u>4/15</u>	Work and Energy in rigid bodies (17- 1, 17-1E, 17-1E2)	17.1-7	#10 due 4/22 17: 10, 17, 23, 29, 34
	4/17	Work and energy in rigid bodies (17-1E3, 17-1E4)		
14	<u>4/22</u>	Impulse and Momentum in rigid bodies (17-2, 17-2E, 17-2E2, 17-2E3, 17-2E4)	17.8-10	#11 due 4/24 17: 60, 63, 81, 85
	<u>4/24</u>	Rigid bodies impact (17-3, 17-3E)	17.11-12	
15	4/29	Test 4(16-17.10)		#12 due 5/6 17: 88, 96, 102, 131
	5/1	Impact (17-3E2)		
16	<u>5/6</u>	3-D kinematics (15-7, 15-7E, 15-7E2)	15.12-15,	#13 due 5/13 15: 184, 253, 236 18: 7, 45, 147
	5/8	3-D kinetics (18-1, 18-1E, 18-2, 18-2E)	B.6-8, 18.1-4	
17	<u>5/13</u>	3-D kinetics FMA (18-3)	18.5-8	
	5/15	Review (In-class)		
18	5/20	Final Exam 4:30-6:30pm		

Notes: Weekly assignments are due every Thursday, except none due during spring break 3/27.

* This problem is available for download on Blackboard