

ENGR 51 Dynamics

Summer 2007

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

Week	Date	Topic (Lecture Number)	Reading	Homework		
1	6/18	Orientation, Introduction to Dynamics (11-1), Kinematics of particles in rectilinear motion (11-2, 11-2E)	11.1-5, Appendix A	#1 11: 19, 28, 46, 53, 105, 124, 131		
	6/19	Kinematics of particle system (11-3, 11-3E), Curvilinear motion in rectangular coordinates (11-4, 11-4E)	11.6, 11.9-12			
	6/20	Curvilinear motion in other coordinates (11-5, 11-5E, 11-5E2)	11.13-14	#2 11: 141, 168 12: 9, 30, 36, 70		
	6/21	Kinetics of particle: FMA method (12-1, 12-1E, 12-1E2, 12-1E3)	12.1-6			
	6/22	Angular momentum (12-2, 12-2E, 12-2E2)	12.7-10			
	2	6/25	Work, Kinetic Energy, and power (13-1, 13-2, 13-2E, 13-2E2)		13.1-4	#3 13: 12, 19, 25, 70, 75, 67
6/26	Test 1(11-12) , Potential energy (13-3, 13-3E)	13.5-8				
	6/27	Impulse and momentum(13-4, 13-4E, 13-4E2)	13.10-11	#4 13: 126, 147 [#] , 156, 173 14: 6, 21, 32, 43		
	6/28	Impact (13-5, 13-6, 13-6E, 13-7, 13-7E)	13.12-15			
	6/29	Particle systems Kinetics (14-1, 14-1E, 14-2, 14-2E, 14-2E2)	14.1-9			
	3	7/2	Rigid body translation and rotation (15-1, 15-2)		15.1-5	#5 15: 10, 21, 40, 50, 57, 64, 69
7/3	Test 2(13-14) , Relative velocity (15-3, 15-3E, 15-3E2)	15.6				
	7/4	<i>Holiday, no class</i>		#6 15: 77, 83, 95, 113, 115, 117		
	7/5	Instant center (15-4, 15-4E, 15-4E2), Relative acceleration (15-5, 15-5E, 15-5E2, 15-5E3)	15.7-9			
	7/6	Rotating reference frame (15-6, 15-6C, 15-6E, 15-6E2)	15.10-11	#7 15:171, 179, 180, 152		
4	7/9	Mass moment of inertia (16-1, 16-2, 16-2E)	Appendix B.1-B.5	#8 B: 4 16: 5, 14 [#] , 37, 60, 69		
	7/10	Test 3(15.1-15.11) , FMA in rigid bodies (16-3, 16-3E, 16-3E2, 16-3E3)	16.1-7			
	7/11	Constrained plane motion (16-4, 16-4E, 16-4E2, 16-4E3, 16-4E4)	16.8	#9 16: 81, 100, 96, 117		
	7/12	Work and Energy in rigid bodies (17- 1, 17-1E, 17-1E2)	17.1-7	#10 17: 12, 18, 22, 33, 37		
	7/13	Work and Energy in rigid bodies (17-1E3, 17-1E4)				
	5	7/16	Impulse and Momentum in rigid bodies (17-2, 17-2E, 17-2E2, 17-2E3)		17.8-10	#11 17: 61, 66, 79, 84
	7/17	Test 4(16-17.10) , Rigid bodies impact (17-3, 17-3E)	17.11-12			
	7/18	Impact (17-3E2)		#12 17: 90, 97, 103, 105		
	7/19	3-D kinematics (15-7, 15-7E, 15-7E2)	15.12-15,	#13 15: 187, 193, 238 18: 6, 21, 44		
	7/20	3-D kinetics (18-1, 18-1E, 18-2, 18-2E, 18-3)	B.6-8, 18.1-8			
	6	7/23	Review			
	7/24	Final Exam 10:30am-12:30pm				

Notes: Assignments are due on Mondays, Wednesdays, and Fridays.

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