

ENGR 251 Dynamics
 Spring 2009
Tentative Calendar (subject to change) for 8th edition of the Textbook

Week	Date	Topic (Lecture Number)	Reading	Homework
1	1/20	Introduction to Dynamics (11-1), Kinematics of particles in rectilinear motion (11-2, 11-2E)	11.1-5, Appendix A	#1 due 1/27 11: 20, 28, 48, 58, 108, 126, 133
	1/22	Kinematics of particle system (11-3, 11-3E), Curvilinear motion in rectangular coordinates (11-4, 11-4E)	11.6, 11.9-12	
2	<u>1/27</u>	Curvilinear motion in other coordinates (11-5, 11-5E, 11-5E2)	11.13-14	#2 due 2/5 11: 143, 170 12: 29, 57, 72, 126
	1/29	Kinetics of particle: FMA method (12-1, 12-1E, 12-1E2, 12-1E3)	12.1-6	
3	2/3	Angular momentum (12-2, 12-2E, 12-2E2)	12.7-10	#3 due 2/17 13: 14, 21, 27, 69, 73, 193
	<u>2/5</u>	Work, Kinetic Energy, and power (13-1, 13-2, 13-2E, 13-2E2)	13.1-4	
4	2/10	Test 1(11-12)		
	2/12	Potential energy (13-3, 13-3E)	13.5-8	#4 due 2/26 13: 121, 146, 155, 172 14: 5, 22, 31, 41
5	<u>2/17</u>	Impulse and momentum(13-4, 13-4E, 13-4E2)	13.10-11	
	2/19	Impact (13-5, 13-6, 13-6E, 13-7, 13-7E)	13.12-15	
6	2/24	Particle systems Kinetics (14-1, 14-1E, 14-2, 14-2E, 14-2E2)	14.1-9	#5 due 3/10 15: 12, 17, 45, 48, 61, 63, 70
	<u>2/26</u>	Rigid body translation and rotation (15-1, 15-2)	15.1-5	
7	3/3	Test 2(13-14)		
	3/5	Relative velocity (15-3, 15-3E, 15-3E2)	15.6	#6 due 3/17 15: 78, 84, 96, 112, 113, 121
8	<u>3/10</u>	Instant center (15-4, 15-4E, 15-4E2)	15.7	
	3/12	Relative acceleration (15-5, 15-5E, 15-5E2, 15-5E3)	15.8-9	#7 due 3/24 15:170, 176, 177, 251
9	<u>3/17</u>	Rotating reference frame (15-6, 15-6C)	15.10-11	
	3/19	Rotating reference frame (15-6E, 15-6E2)		
10	<u>3/24</u>	Mass moment of inertia (16-1, 16-2, 16-2E)	Appendix B.1-B.5	#8 due 4/2 B: Download* 16: 6, 11, 39, 59, 69
	3/26	FMA in rigid bodies (16-3, 16-3E, 16-3E2, 16-3E3)	16.1-7	
11	3/31	Test 3(15.1-15.11)		#9 due 4/7 16: 80, 96, 100, 123
	<u>4/2</u>	Constrained plane motion (16-4, 16-4E, 16-4E2, 16-4E3, 16-4E4)	16.8	
12	<u>4/7</u>	Work and Energy in rigid bodies (17- 1, 17-1E, 17-1E2)	17.1-7	#10 due 4/21 17: 10, 17, 23, 29, 34
	4/9	Work and energy in rigid bodies (17-1E3, 17-1E4)		
13	4/14	<i>No Class – Spring Break</i>		
	4/16	<i>No Class – Spring Break</i>		#11 due 4/23 17: 60, 63, 81, 85
14	<u>4/21</u>	Impulse and Momentum in rigid bodies (17-2, 17-2E, 17-2E2, 17-2E3)	17.8-10	
	<u>4/23</u>	Rigid bodies impact (17-3, 17-3E)	17.11-12	#12 due 5/5 17: 88, 96, 102, 131
15	4/28	Test 4(16-17.10)		
	4/30	Impact (17-3E2)		#13 due 5/12 15: 184, 253, 236 18: 7, 45, 147
16	<u>5/5</u>	3-D kinematics (15-7, 15-7E, 15-7E2)	15.12-15,	
	5/7	3-D kinetics (18-1, 18-1E, 18-2, 18-2E)	B.6-8, 18.1-4	
17	<u>5/12</u>	3-D kinetics FMA (18-3)	18.5-8	
	5/14	Review		
18	5/19	Final Exam 4:30-6:30pm		

Notes: Weekly assignments are due every Thursday except during spring break.

* This problem is available for download on Blackboard