

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

Week	Date (due)	[In-class topic] Topic (Lecture Number)	Reading	Homework
1	6/15 (A1)	[Orientation] Introduction to Dynamics (11-1), Kinematics of particles in rectilinear motion (11-2, 11-2E)	11.1-5, Appendix A	#1 due 6/17 11: 20, 30, 48, 55, 109, 126, 133
	6/16	Kinematics of particle system (11-3, 11-3E), Curvilinear motion in rectangular coordinates (11-4, 11-4E)	11.6, 11.9-12	
	6/17 (A2,H1)	[Particle system] Curvilinear motion in other coordinates (11-5, 11-5E, 11-5E2)	11.13-14	#2 due 6/22 11: 143, 170 12: 10, 126, 38, 72
	6/18	[Curvilinear motion] Kinetics of particle: FMA method (12-1, 12-1E, 12-1E2, 12-1E3)	12.1-6	
	6/19 (A3)	Angular momentum (12-2, 12-2E, 12-2E2)	12.7-10	
2	6/22 (A4,H2)	[FMA problems] Work, Kinetic Energy, and power (13-1, 13-2, 13-2E, 13-2E2)	13.1-4	#3 due 6/24 13: 14, 21, 27, 69, 73, 193
	6/23	Potential energy (13-3, 13-3E)	13.5-8	
	6/24 (A5,H3)	[Q&A, Test 1] Impulse and momentum(13-4, 13-4E, 13-4E2)	13.10-11	#4 due 6/29 13: 121, 146, 155, 172 14: 5, 22, 31, 41
	6/25	[Work/energy and IM] Impact (13-5, 13-6, 13-6E, 13-7, 13-7E, 13-7E2)	13.12-15	
	6/26 (A6)	Particle systems Kinetics (14-1, 14-1E, 14-2, 14-2E, 14-2E2)	14.1-9	
3	6/29 (A7,H4)	[Impact] Rigid body translation and rotation (15-1, 15-2)	15.1-5	#5 due 7/1 15: 12, 17, 45, 48, 61, 63, 70
	6/30	Relative velocity (15-3, 15-3E, 15-3E2)	15.6	
	7/1 (A8,H5)	[Q&A, Test 2] Instant center (15-4, 15-4E, 15-4E2)	15.7	#6 due 7/6 15: 78, 84, 96, 112, 113, 121
	7/2	[No Class] Take a break, or use the time to catch up/get ahead!		
	7/3	Relative acceleration (15-5, 15-5E, 15-5E2, 15-5E3)	15.8-9	
4	7/6 (A9,H6)	[RB kinematics 15.1-9] Rotating reference frame (15-6, 15-6C, 15-6E, 15-6E2)	15.10-11	#7 due 7/8 15:170, 176, 177, 251
	7/7	Mass moment of inertia (16-1, 16-2, 16-2E)	Appendix B.1-5	
	7/8 (A10,H7)	[Rotating ref frame] FMA in rigid bodies (16-3, 16-3E, 16-3E2, 16-3E3)	16.1-7	#8 due 7/9 B: Download* 16: 6, 11, 39, 59, 69
	7/9 (H8)	[Q&A, Test 3] Constrained plane motion (16-4, 16-4E, 16-4E2, 16-4E3, 16-4E4)	16.8	
	7/10 (A11)	Work and Energy in rigid bodies (17- 1, 17-1E, 17-1E2)	17.1-7	#9 due 7/13 16: 80, 96, 100, 123
5	7/13 (A12,H9)	[FMA in RB] Work and Energy in rigid bodies (17-1E3, 17-1E4, 17-1E5)		
	7/14	Impulse and Momentum in rigid bodies (17-2, 17-2E, 17-2E2, 17-2E3, 17-2E4)	17.8-10	
	7/15 (A13,H10)	[RB kinetics] Rigid bodies impact (17-3, 17-3E)	17.11-12	#10 due 7/15 17: 10, 17, 23, 29, 34
	7/16 (H11)	[Q&A, Test 4] Impact (17-3E2, 17-3E3)		
	7/17 (A14)	3-D kinematics (15-7, 15-7E, 15-7E2)	15.12-15	#11 due 7/16 17: 60, 63, 81, 85
6	7/20 (A15,H12)	[3-D kinematics] 3-D kinetics (18-1, 18-1E, 18-2, 18-2E)	B.6-8, 18.1-4	
	7/21	3-D kinetics FMA (18-3)	18.5-8	
	7/22 (A16,H13)	[Review]		#12 due 7/20 17: 88, 96, 102, 131
	7/23	[Q&A, Final Exam (9:45-11:45am)]		