

ENGR 251 Dynamics
 Fall 2009
Tentative Calendar (subject to change)

Week	Date	Topic (Online Lecture Number)	Reading
1	8/18	Introduction to Dynamics (11-1), Kinematics of particles in rectilinear motion (11-2, 11-2E)	Appendix A-C, 12.1-3
	8/20	Kinematics of particle system (11-3, 11-3E), Curvilinear motion in rectangular coordinates (11-4, 11-4E)	12.4-6, 12.9-10
2	8/25	Curvilinear motion in other coordinates (11-5, 11-5E, 11-5E2)	12.7-8
	8/27	Kinetics of particle: FMA method (12-1, 12-1E, 12-1E2, 12-1E3)	13.1-5
3	9/1	Angular momentum (12-2, 12-2E, 12-2E2)	13.6, 15.5-6
	9/3	Work, Kinetic Energy, and power (13-1, 13-2, 13-2E, 13-2E2)	14.1-4
4	9/8	Test 1(11-12)	
	9/10	Potential energy (13-3, 13-3E)	14.5-6
5	9/15	Impulse and momentum(13-4, 13-4E, 13-4E2)	15.1-3
	9/17	Impact (13-5, 13-6, 13-6E, 13-7, 13-7E)	15.4
6	9/22	Particle systems Kinetics (14-1, 14-1E, 14-2, 14-2E, 14-2E2)	14.3, 15.2, 15.5-7
	9/24	Rigid body translation and rotation (15-1, 15-2)	16.3
7	9/29	Test 2(13-14)	
	10/1	Relative velocity (15-3, 15-3E, 15-3E2)	16.5
8	10/6	Instant center (15-4, 15-4E, 15-4E2)	16.6
	10/8	<i>No Class -- Flex Day</i>	
9	10/13	Relative acceleration (15-5, 15-5E, 15-5E2, 15-5E3)	16.7, 16.4
	10/15	Rotating reference frame (15-6, 15-6C)	16.8
10	10/20	Rotating reference frame (15-6E, 15-6E2)	
	10/22	Mass moment of inertia (16-1, 16-2, 16-2E)	17.1
11	10/27	Test 3(15.1-15.11)	
	10/29	FMA in rigid bodies (16-3, 16-3E, 16-3E2, 16-3E3)	17.2-5
12	11/3	Constrained plane motion (16-4, 16-4E, 16-4E2, 16-4E3, 16-4E4)	
	11/5	Work and Energy in rigid bodies (17- 1, 17-1E, 17-1E2)	18.1-5
13	11/10	Work and energy in rigid bodies (17-1E3, 17-1E4)	
	11/12	Impulse and Momentum in rigid bodies (17-2, 17-2E, 17-2E2, 17-2E3)	19.1-3
14	11/17	Rigid bodies impact (17-3, 17-3E)	19.4
	11/19	Impact (17-3E2)	
15	11/24	Test 4(16-17.10)	
	11/26	<i>No Class - Thanksgiving</i>	
16	12/1	3-D kinematics (15-7, 15-7E, 15-7E2)	20.1-4
	12/3	3-D kinetics (18-1, 18-1E, 18-2, 18-2E)	21.1-3
17	12/8	3-D kinetics FMA (18-3)	21.4
	12/10	Review	
18	12/15	Final Exam 4:30-6:30pm	

- Notes:** (1) Weekly assignments are due at beginning of class or on Blackboard every Thursday at 5:30pm, except A8 due Tuesday 10/13 and none due 11/26.
 (2) Homework on MasteringEngineering due most Wednesdays and Sundays 5pm (see Mastering site for each due date.)
 (3) Online Quizzes (timed, 10-20 minutes) available Sun-Tues noon on MasteringEngineering