

**CIVIL AND ENVIRONMENTAL ENGINEERING DEPARTMENT**  
**CE2120 Syllabus: Applied Mechanics II (SPRING 2010)**

**Text:** Vector Mechanics for Engineers:Dynamics  
 Beer,Johnston & Cornwell,McGraw -Hill, 9th Ed.,2009

**Primary Instructor: Dr. Jeong-Ho Kim** (Lecture Session: MWF 9:00-9:50 AM,CAST 212  
 Office: CAST #320, 486-2746

**Review-Session Instructor: Dr. Ramesh Malla** (Review Session: TuTh 4:00-5:45PM, UTEB 172  
 Office: CAST #323, 486-3683

**Prerequisites:** CE2110 and MATH 2110 or 2130

Date	Period	Sections	Topics	Homework	
1/20	1	11.1	Introduction		
1/22	2	11.2-3	Rectilinear Motion		
<b>1/25</b>	3	11.4-6	Uniformly Accelerated Motion		
1/27	4	11.7-12	Graphical Meth.+Curv. Motion (Rect.)	#1	11.2,11,17
1/29	5	11.13-14	Curvilinear Motion (Other Components)	#2	11.34,36,50
<b>2/1</b>	6	12.1-6	Equations of Motion	#3	11.94,106,118
2/3	7	12.1-6	Equations of Motion	#4	11.141,143,153
2/5	8	12.7-10	Angular Momentum	#5	12.6,19,26
<b>2/8</b>	9	13.1-5	Work and Energy	#6	12.46,55,59
2/10	10	13.1-5	Work and Energy		class cancelled
2/12	11	13.6-8	Conservation of Energy	#7	12.66,70,87
<b>2/15</b>	12	13.9	Application to Space Mech.	#8	13.8,13,25
2/17	13	13.10-11	Impulse and Momentum	#9	13.56,62,73
2/19	14	13.12-15	Impact (1)	#10	13.86,95,104
<b>2/22</b>	15	13.12-15	Impact (2)	#11	13.122,131,134
2/24	16		Review or Make-up Class	#12	13.161,165,171
2/26	17		<b>QUIZ 1</b>		
<b>3/1</b>	18	14.1-6	Systems of Particles		
3/3	19	14.7-9	Systems of Particles	#13	13.177,186,196
3/5	20	14.10-12	Variable Systems of Particles	#14	14.5,13,19
<b>3/7-3/13</b>			<b>Spring Break</b>		
<b>3/15</b>	21	15.1-4	Translation/Rotation		
3/17	22	15.5-6	General Plane Motion	#15	14.34,47,53
3/19	23	15.7	Instantaneous Center of Rotation	#16	15.2,12,18
<b>3/22</b>	24	15.8-9	Accelerations in Plane Motion	#17	15.38,43,64
3/24	25	15.10-11	Coriolis Accel. In Plane Motion	#18	15.79,88,99
3/26	26	15.12-13	Motion About a Fixed point	#19	15.113,125,129
<b>3/29</b>	27	15.14-15	Coriolis Accel. In 3-D	#20	15.149,160,165
3/31	28	9.11-15	Moment of Inertia	#21	15.184,190,195
4/2	29		Review or Make-up Class		
<b>4/5</b>	30		<b>QUIZ 2</b>		
4/7	31	16.1-7	Plane Motion of Rigid Bodies		
4/9	32	16.1-7	Plane Motion of Rigid Bodies	#22	9.111,112,123
<b>4/12</b>	33	16.8	Constrained Plane motion	#23	16.5,14,32
4/14	34	16.8	Constrained Plane motion	#24	16.54,57,71
4/16	35	17.1-7	Work and Energy	#25	16.76,99,112
<b>4/19</b>	36	17.1-7	Work and Energy (Computer Prob #16.C1)	#26	16.117,127,138
4/21	37	17.8-10	Impulse and Momentum	#27	17.11,18,25
4/23	38	17.8-10	Impulse and Momentum	#28	17.53,61,74
<b>4/26</b>	39	17.11-12	Eccentric Impact	#29	17.96,99,108
4/28	40		Final Preview	#30	17.117,123,129
4/30	41		Final Preview		

Grading: Homework* (30 HWs)	12%
Quizzes	40%
Final Exam	40%
Computer Problem	5%
Attendance	3%
<b>Total</b>	<b>100%</b>

Review Sessions: **1/26,28, 2/2,4,9,11,16,18,23,25, 3/2,4,16,18,23, 25,30, 4/1, 6, 8,13, 15, 20, 22, 27, 2**