

# HOMWORK ASSIGNMENTS

## ME 324 (Fall 2000)

<u>Due Date</u>	<u>Problems</u>	<u>Topic</u>
		<b>Kinematics of Particles</b>
Friday, Sep 8	2/16, 22 2/80, 88 2/113, 126 2/152, 171 (delete)	rectilinear motion plane curvilinear motion normal and tangential coordinates polar & cylindrical coordinates
Friday, Sep 15	2/191, 194, 200	relative motion
		<b>Dynamics of Particles</b>
	3/3, 14, 18, 36 3/75, 86, 87	rectilinear motion curvilinear motion
Friday, Sep 22	3/125, 132, 134, 142 3/154, 163, 166 3/191, 200, 208	work & energy potential energy impulse and momentum (linear)
Friday, Sep 29	3/231, 236, 238 SP 3/24, 3/250, 3/256 3/307, 310, 313	impulse and momentum (angular) impact relative motion
Friday, Oct 6	3/320, 323, 339, 341	review problems
		<b>Dynamics of Systems of Particles</b>
	4/11, 12, 14, 15, 23, 25	energy, momentum, and mass center
Friday, Oct 13	4/16, 17, 18, 21	angular momentum
		<b>Plane Dynamics of Rigid Bodies</b>
	5/9, 15, 16, 21	rotation
Friday, Oct 20	SP 5/4, 5/26, 40, 49 5/71 (delete), 72, 79 5/101, 106, 110	general motion (rolling) relative motion instantaneous center of zero velocity
Friday, Oct 27	5/130, 131, 132, 137 SP 5/16, 5/153, 164, 172	relative acceleration rotating axes

### **Plane Dynamics of Rigid Bodies**

Friday, Nov 3	B/2, 11, 15 (Ixx term only) 6/14, 21, 24 6/42, 54, 56	mass moments of inertia translation fixed-axis rotation
Friday, Nov 10	6/89, 92, 100 6/95, 96, 103	general plane motion (rolling) general plane motion (rods)
Friday, Nov 17	6/125, 128, 135, 136 6/187, 189, 193, 198	work-energy impulse-momentum

### **3-D Kinematics and Dynamics**

Friday, Dec 1	SP 7/1, 7/20 7/40, 44, 48 7/55, 56, 62	fixed point rotation general motion angular momentum, inertia matrix
Friday, Dec 8		kinetic energy, gyroscopic motion