

AME 301 - Dynamics - Fall 2011

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Office Hours: KAP 254C, Tu, W, Th, 11:00am-12:00pm **and** by appointment

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Office Hours: Monday: 5pm-7pm and Friday: 3pm-5pm in VHE 202

Textbook: Beer, Johnston, Cornwell, *Vector Mechanics for Engineers: Dynamics, Ninth Edition*, McGraw-Hill, 2009.

Class Meets in GFS 116, 9:30-10:50am Tu,Th.

Grading:

10% Homeworks

25% First Exam (in class on September 20)

25% Second Exam (in class on October 18)

40% Final Exam (December 8; 11-1pm)

Homeworks:

This course has weekly homeworks due in class on Tuesday of every week. Late homeworks will not be graded. Homeworks will be graded for neatness in addition to technical content. Solutions to homeworks will be posted at this website on the day they are due.

Syllabus:

Week	Topic/Chapters	Homework	Additional Solved Problems	Additional Interesting Problems
1 (Aug 23, 25)	Review of Vector Algebra, Kinematics of Particles 11.1-11.6	11.28, 11.32, 11.33, 11.36, 11.40	11.19, 11.24, 11.27, 11.43, 11.45	11.38, 11.39, 11.42, 11.44, 11.46
2 (Aug 30, Sep 1)	Kinematics of Particles: 11.9-11.14. Kinetics of Particle: Newton's Method: 12.1-12.6	11.136, 11.137, 11.149, 11.161, 11.170	11.159, 11.167, 11.169, 11.176, 11.178	11.141, 11.142, 11.186, 11.189, 11.192
3 (Sep 6, 8)	Kinetics of Particle: Newton's Method: 12.7-12.13	12.15, 12.25, 12.42, 12.76, 12.89	12.26, 12.37, 12.49, 12.63, 12.127	12.4, 12.35, 12.38, 12.88, 12.92
4 (Sep 13, 15)	Kinetics of Particles: Energy Methods: 13.1-13.9	13.21, 13.32, 13.95, 13.105, 13.110	13.33, 13.38, 13.53, 13.63, 13.107	13.30, 13.37, 13.54, 13.73, 13.98
5 (Sep 20: First Exam, 22)	Kinetics of Particles: Energy Methods: 13.10-13.15	13.123, 13.132, 13.138, 13.149, 13.198	13.135, 13.140, 13.160, 13.196, 13.194	13.141, 13.142, 13.152, 13.164, 13.185
6 (Sep 27, 29)	Systems of Particles: 14.1-14.5	14.3, 14.6, 14.17, 14.41, 14.49	14.39, 14.43, 14.44, 14.51, 14.55	14.1, 14.9, 14.35, 14.38, 14.31
7 (Oct 4, 6)	Systems of Particles: 14.7-14.12	14.109, 15.10, 15.32, 15.43, 15.94	14.113, 15.72, 15.138, 14.141, 15.148	14.112, 15.41, 15.55, 15.88, 15.144
8 (Oct 11, 13)	Kinematics of Rigid Bodies: 15.1-15.7	15.122, 15.158, 15.173, 15.179, 15.201	15.156, 15.177, 15.181, 15.182	15.186, 15.204, 15.206, 15.208, 15.212
9 (Oct 18: Second Exam, 20)	Kinematics of Rigid Bodies: 15.8-15.15	16.4, 16.11, 16.20, 16.67, 16.71,	16.1, 16.14, 16.20, 16.30, 16.35	16.50, 16.60, 16.61, 16.65, 16.74
10 (Oct 25, 27)	Plane Motion of Rigid Bodies: 16.1-16.4	16.75, 16.78, 16.97, 16.110, 16.149	16.113, 16.127, 16.133, 16.141, 16.148	16.123, 16.131, 16.149, 16.145, 16.146
11 (Nov 1, 3)	Plane Motion of Rigid Bodies: 16.5-16.8	17.12, 17.17, 17.29, 17.79, 17.88	17.3, 17.40, 17.41, 17.78, 17.87	17.63, 17.69, 17.81, 17.82, 17.89
12 (Nov 8, 10)	Plane Motion of Rigid Bodies, Energy Methods: 17.1-17.12	17.98, 17.109, 18.4, 18.11, 18.35	17.114, 17.120, 17.123, 17.131, 17.133	17.132, 18.6, 18.29, 18.37, 18.53
13 (Nov 15, 17)	Kinematics of Rigid Bodies in 3D: 18.1-18.7			
14 (Nov 22)	Kinematics of Rigid Bodies in 3D: 18.1-18.7	19.28, 19.39, 19.56, 19.96, 19.97	19.100, 19.124	
15 (Nov 29, Dec 1)	Mechanical Vibrations: 19.1-19.10			