

MAE2323 – Dynamics (3 Credits)
Fall Semester 2009
Course Description

Instructor: Bo P. Wang
304 C Woolf Hall
Office Hour: 1:30 to 3 PM, M W
bpwang@uta.edu

Lectures: Mondays and Wednesdays, 3:30 – 4:50 PM, WH 221

Website: <http://www-woolf.uta.edu>.

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Textbook :

- ***Engineering Mechanics: Dynamics:*** R.H. Hibbeler (Prentice Hall, 2007) – 11th Edition

Course Contents

1. Kinematics of a particle

Rectilinear motion
Curvilinear motion
Relative motion

2. Kinetics of a particle

Newton's law of motion
Force and acceleration method
Work and energy method
Impulse and momentum method

3. Kinematics of a rigid body

Rigid body motion: translation and rotation
Rotation about a fixed axis
Absolute motion Analysis
Relative motion analysis: Velocity & Acceleration

4. Kinetics of a rigid body

Newton's law of motion for rotation
Moment of inertia
Force and acceleration method
Work and energy method
Impulse and momentum method

Grading:

Homework 10%, (100 points); Quiz 10%, (100 points); ***Late homework will not be acceptable.***
Exam No.1 25% (250 points);, Exam No.2 25% (250 points);
Final Exam 30% (300 points);
A: >85%, B: 72 to 84%, C: 60 to 71%; D: 50 to 59%; F: <49%