

ME 104: Engineering Mechanics II

Fall Semester 2015

Units: 3

Lectures: Tue./Thu. 2:00-3:30, Rm. 105 North Gate

Instructor: Prof. T. I. Zohdi, Rm. 6117 Etchevery Hall

Office hours: TBA

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Discussion sessions: TBA

GSI: Brett Kelly and Erden Yildizdag

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GSI Office hours: TBA

Course Materials: (1) Free scanned notes (2) Free “primer” and (3) Reference text: Meriam and Kraige. Engineering Mechanics: Dynamics. 6th Edition.

Grading: The course grade will be based on the following scheme:

Exam I : 20%

Exam II : 20%

Computational analysis and design projects (2 – 3 of them) : 5 – 10%

“POP” Quizzes (approximately 7 – 10 of them) : 5 – 10%

Final Exam : 40 – 50%

Approximately 4-6 problems will be assigned every week. The homework will not be collected. The TA will go over the homework problems each week. Additionally, I will solve quite a few key problems in class. The quasi-weekly quizzes will come directly out of the lectures, homework and old exams in order to give you practice for the exam questions.

Topics to be covered

1. Rectilinear kinematics of a particle
2. Polar, path and cylindrical kinematics of a particle
3. Relative kinematics of a particle
4. Kinetics of a particle
5. Work and energy principles of a particle
6. Linear and angular momentum of a particle
7. Impact of a particle
8. Systems of particles
9. Rigid body kinematics
10. 2-D rigid body motion
11. 3-D rigid body motion
12. An introduction to vibrations