ME 302 A1: ENGINEERING MECHANICS II
LECTURE: M-W 4–6 PM PHO 210
DISCUSSION: TBA

Instructor: Prof. Kamil L. Ekinci
Office: ENG 408
Office Hours: F 3-4 pm or by appointment
Email: ekinci@bu.edu

GTF: Heng Luo
Email: hengluo@bu.edu

Textbook: Williams JH, *Fundamentals of Applied Dynamics*, John Wiley and Sons, Inc., 1996.

Supplemental Resources: Handouts will be given during class.

Course Topics:
Kinematics of particles and rigid bodies
- Inertial reference frames; coordinate systems; orbital elements & trajectories.
- Intermediate non-inertial reference frames.

Direct/Algebraic approach to kinetic analysis (Newtonian)
- linear and angular momenta, moments of inertia.
- Work/energy relationship.

Indirect approach to kinetic analysis (Lagrangian)
- Hamilton's principle, Lagrange's equation.

Grading:

Quizzes + Projects:	15% (quizzes given weekly)
Exams 1:	20%
Exams 2:	30%
Final Exam:	35% (comprehensive; will be given on the date determined by registrar.)

Make-up Policy:
No make-ups will be given. If you miss an exam without a valid excuse, you will get a zero. If you have to miss an exam with an excuse, you will be graded based upon the rest of your portfolio.
NO MAKE-UPS, NO EXTENSIONS, NO EXCEPTIONS.

Assignments:
Homework problems will be assigned and solutions made available on Blackboard usually on Thursdays. **Please check promptly.** The homework problems and lectures will serve as the basis for quizzes to be given the week after homework is assigned. The project will serve as a platform for students to apply principles learned in class to real-world scenarios. Further information will be given during the semester.

ME 302 A1 Syllabus
Spring 2012

WK	DATES	READING	TOPIC
1	1/18		Review of Particle Kinematics
2	1/23 1/25		Review of Particle Kinematics
3	1/30 2//1	CH 3	Rigid Body Kinematics
4	2/6 2/8	CH 3	Rigid Body Kinematics
5	2/13 2/15	CH 4	Particle Dynamics
6	2/20 2/22	CH 6	Moment of Inertia
7	2/27 2/29	CH 6	**Exam on 2/27** Moment of Inertia
8	3/5 3/7	CH 5	Rigid Body Dynamics
SPRING BREAK			
9	3/19 3/21	CH 5	Generalized Coordinates
10	3/26 3/28	CH 5	Work and State Functions Hamilton's Principle
11	4/2 4/4	CH 6	Lagrangian Dynamics
12	4/9 4/11	CH 6	Lagrangian For Rigid Bodies
13	4/18		University holiday on 4/16 **Exam on 4/18**
14	4/23 4/25	CH 8	Small Oscillations
15	4/30 5/2	CH 8	Small Oscillations

Note: Syllabus will be updated as the semester goes by.