ENGR 3399: Mechanical and Aerospace Systems II
Spring 2011

Instructor:
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Office Hours: T/F 10am-noon. You're welcome to stop by my office any time.

Brief Course Description:
This course is an introduction to the analysis and simulation of mechanical and aerospace structural systems. We will be doing a significant amount of numerical simulation using MATLAB, including SIMULINK, Solidworks Simulation, and/or ANSYS. Please bring your laptops to every class. This semester we will be focusing on mechanism design, specifically applied to a grasping landing gear for bird-sized UAV's.

Learning Objectives:
After completion of this course, you will be able to
   * Carry out basic finite element analysis on structures and mechanical components, e.g., static, dynamic, frequency, thermal, basic nonlinear analysis
   * Carry out 3D dynamic, motion simulations for systems of rigid bodies.
   * Apply a systematic design process to the manufacture of a prototype

Books:
1) Motion Simulation and Mechanism Design with SolidWorks Motion 2009 by KH Chang
2) Engineering Analysis with SolidWorks Simulation 2010 by P. Kurowski

Assessment:
Assignments: 100%. Assignments consist of problems, projects, and readings. You may work together on these but you must write up and submit your own work.

Grades:
Grades will be (approximately) assigned on a 'straight' scale: > 90% A's, > 80% B's, > 70% C's, > 55% D's, and <55% F.

Past Due Date Policy:
Let me know as soon as possible if you think you won't be able to turn in an assignment on the due date. Extensions may be granted for unusual circumstances. Otherwise, 5% (half a letter grad) will be subtracted from late assignments.

Course Folder:
All related course material can be found in P:\+Courses\ENGR3399_MechAero_Sp11