Instructor: Dr. Chan Ham  
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Office hours: M & W 4:20 – 5:20 pm (308A, Engr I) or by appointment only.

Class time: Lecture – M & W 3:00 pm - 4:15 pm

Prerequisites: EML 3312C or EML 3804C or EAS 3404C or C.I

Grading (+ & - system): Homework 20%, Projects 20% (Term 15% and Class 5%), and Three Exams 20% each (There may be quizzes/design project presentation for 5~10% bonus)

Course description:
Introduction to mechatronics with emphasis on analog & digital electronics, sensors and transducers, actuators, and microprocessors. Lectures are intended to provide the student with foundational concepts in mechatronics and practical familiarity with common elements making up mechatronic systems. Projects are designed to give the student hands-on experience with components and measurement equipment used in the design of mechatronic products.


Course Goals:
1. To develop an understanding of the basic elements underlying mechatronic systems: analog electronics, digital electronics, sensors, actuators, and micro-controllers.
2. To understand how to interface electromechanical systems to micro-controllers.
3. To gain hands-on experience with commonly used electronic test and measurement instrumentation.
4. To improve written communication skills through laboratory and project reports.
5. To gain practical experience in applying knowledge gained in the course through a hands-on project.

References:

Projects:
1) Design: an actual motor controller, DC or Stepping motor (due 4/16/03)
2) Class: presentation of class discussion items
   ➢ 5 ~ 10 min./topic & 2 topics/student: using the Power point
   A complete report (both hard & soft copies) and the Power point presentation
   Email to rpatil@mail.ucf.edu