MEC 316 Mechanical Engineering Lab I
Sensors and Instrumentation
Fall 2008

Course Objectives:

Students are introduced to a variety of sensors and instruments commonly used in mechanical engineering practice. The lectures provide background on the general principles of measurement systems and their performance characteristics. Measurement of different physical quantities will also be discussed in the class. The laboratory experiments provide hands-on experience in the use of several sensors and instruments that form a basis for the laboratory courses MEC 317 and MEC 417 where the use of these instruments are part of more advanced experiments. Students will design and build a measurement device. In addition, students are required to learn the basics of probability and statistics. Students will:

1. Learn to apply mathematics, physics, chemistry, and engineering principles to measurement problems in mechanical engineering;
2. Design and conduct experiments and interpret data;
3. Learn professional measurement techniques used to engineer thermal and mechanical systems;
4. Identify, formulate, and solve engineering problems;
5. Learn to communicate effectively;
6. Use modern engineering techniques, skills, and tools.


Project advisors: Profs. Ge and Chiang

Teaching Assistants: TBA

Laboratory Specialist: Mr. Ta-Yung Hsu


Time and Place:  
Lectures: 9:35 – 10:30a MWF, Javits 109;  
Labs: 2:20 – 5:10p TuTh, Rm 206 Heavy Engineering

Grades: To pass this course a student must complete all six labs, and must complete the design project.
Passing grades will be calculated based on

- 6 Laboratory reports 60%
- Design Project 35%
- Attendance, Comportment, and exercises 5%

**Americans with Disabilities Act**
If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact Disability Support Services at (631) 632-6748 or http://studentaffairs.stonybrook.edu/dss/. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the following website: http://www.sunysb.edu/ehs/fire/disabilities.shtml

**Statement on Academic Dishonesty**

Academic dishonesty is an extremely serious offense and will not be tolerated in any form. Academic dishonesty in general is the presentation of intellectual work that is not originally yours. Examples include, *but are not limited to*, copying or plagiarizing class assignments including homework, reports, designs, and other submitted materials; copying or otherwise communicating answers on exams with other students; bringing unapproved aids, either in physical (written) or electronic form to an exam; obtaining copies of an exam prior to its administration, etc. Academic dishonesty violates both the ethical and moral standards of the Engineering profession and all infractions related to academic dishonesty will be prosecuted to the fullest via the CEAS CASA committee. For you, the honest student, academic dishonesty results in lower class curves, hence a depression in your GPA and class standing, while cheapening the degree you earn.