

EEL 5333
Solid State Sensors
Spring 2005

Instructor: Dr. Jim P. Zheng Office: Rm. 346
Lecture Hours: MWF 2:00-2:50pm
Office Hours: MW 3:00-4:00pm
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Prerequisites: EEL3300, or equivalent

Required Textbooks:

1. S. M. Sze, Semiconductor Sensors, John Wiley & Son, Inc., 1994.
2. R. C. Jaeger, Introduction to Microelectronic Fabrication, Addison-Wesley Publishing Co. 1993.

Reference Books:

1. S. A. Campbell, The Science and Engineering of Microelectronic Fabrication, 2nd Ed. Oxford, 2001.
2. S. M. Sze, Physics of Semiconductor Devices, 2nd Ed. John Wiley & Son, Inc., 1981.

Course Content:

The course provides complete coverage of all-important aspects of all modern semiconductor sensor devices. The course offers detailed coverage of the fabrication technologies for semiconductor sensor devices. The course also offers description of characteristics and operational principles of the entire spectrum of devices made from silicon and other semiconductors. The sensor family covered in this course includes acoustic, mechanical, magnetic, radiation, thermal, chemical, and biologic sensors.

Grading:	Examinations:	40%
	Homework:	15%
	Design project and Course presentation:	40%
	Attendance:	5%

Policy Statements:

- Attendance is mandatory.
- Homework is due at the beginning of class.
- The general policy is no makeup exams and quizzes. In the event of an excused absence, you must notify the instructor prior to the exam to discuss proper procedure.
- Cellular phones and beepers must be turned off in the classroom.
- Coming late or leaving early will be considered as the absence of class.
- There has always been an emphasis on the Honor Code. Violation of this code can result in course failure and/or dismissal from the College of Engineering.
- Students with disabilities needing academic accommodations should: 1) register with and provide documentation to the Student Disability Resource Center (SDRC); 2) bring a letter to the instructor from SDRC indicating that you need academic accommodations. This should be done within the first week of class.