

**ECE609 Semiconductor Devices
Spring 2009**

Instructor: Prof. Eric Polizzi
Office: Marcus 201C
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Day and Time: M-W-F 10:10am-11:00
Place: ELAB 325
Office Hours: M-W-F 11:10am-12:00—backup 1:10pm-2pm

Textbook :

- **J.P. Colinge and C. A. Colinge, "*Physics of Semiconductor Devices*", (Kluwer Academic, Boston, 2002).**
- Robert F. Pierret, "*Semiconductor Devices Fundamentals*", Addison-Wesley 1996.
- Robert F. Pierret "*Advanced Semiconductor Fundamentals*"

Suggested Reading:

- S. M. Sze, "*Semiconductor Devices: Physics and Technology*", (John Wiley and Sons, 1985).
- Y. Taur and T. H. Ning, "*Fundamentals of Modern VLSI Devices*", (Cambridge University Press, New York, 1998)

Purpose of the Course:

- Provide the foundations to understand what is a semiconductor
- Provide the foundations to understand the electronic properties and the physics of charge transport in semiconductors
- Explain the operating principles in semiconductor devices (diodes, capacitors and transistors)
- Perspectives of emerging device technology and future directions for electronics

Grading:	Homework	25% (5/6 HW)
	Midterm	35%
	Final	40%
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Total	100%	

Course Policies and Friendly Advices

- Homework is due at the beginning of the lecture on the due date. Late HW will be accepted but 10 points will be withdrawn every hour (starting as soon as the beginning of the class- 10:20am). Failure to give your HW back is not acceptable.
- Make-up exams will be given only if you provide a valid written excuse and notify me prior to the missed exam. Other missed exams will be considered failures.
- Class start at 10:10am. Late arrival is distracting and inconsiderate.
- Examinations assume familiarity with all lectures and homework problems. You are expected to attend all classes and are responsible for knowing the material and assignments from every class.
- **If you are having difficulties with any of the material (or basic background), come to see me for help during office hours. Do so before you fall behind.**
- Homework, Handouts, Class Notes will be posted on-line on my website. Important announcement will be sent by e-mail.