

ELEN 136 Electronic Circuits I
Course Outline
Fall 2004
Mark Nesdaoly

Texts: Electronic Devices and Circuit Theory by Boylestad & Nashelsky and Circuit Analysis With Devices: Theory and Practice by Robbins & Miller

Topics covered:

- Semiconductor theory, band theory of solids, doping, minority and majority carrier conduction
- Semiconductor diodes, biasing, temperature effects, zener diodes, LEDs, load line techniques
- Bipolar transistors, structure, characteristic curves, biasing configurations
- Field effect transistors, structure, characteristic curves, biasing configurations
- Transistor switches and amplifiers, BJT and FET switches, signal analysis, CE, CB, CC amps, CS amps, load line analysis, small signal analysis
- General amplifier concepts, R_{in} , R_{out} , loading effects, cascaded amplifiers

Grading:

Midterms (3)	30%
Assignments	15%
Labs	15%
Final exam	40%