

EE 332 - Electronic Devices Laboratory

1997-1999	EE 332-1. Electronic Devices Laboratory. Applications of diodes and transistors
Catalog Data	in analog circuits, design of bias circuits. Prerequisites: EE 301 and EE 302; Corequisite: EE 331.
Textbook	Sedra & Smith, <i>Microelectronic Circuits</i> , 4th ed., Oxford University Press, 1997.
Coordinator	M. K. Kazimierczuk, Professor of Electrical Engineering
Goals	Provide each student with an opportunity to study and apply semiconductor devices and apply electronic circuit theory in the design of selected analog circuits.
Topical Prerequisites	Each student should: <ul style="list-style-type: none"><input type="checkbox"/> be able to apply Ohm's law<input type="checkbox"/> be able to apply KVL and KCL<input type="checkbox"/> be able to apply voltage and current dividers<input type="checkbox"/> be able to apply the principle of superposition<input type="checkbox"/> be familiar with fundamental concepts of dc circuits<input type="checkbox"/> be familiar with sinusoidal steady-state analysis for resistive circuits<input type="checkbox"/> be familiar with concepts of independent ideal and real sources<input type="checkbox"/> be familiar with concepts of dependent ideal and real sources<input type="checkbox"/> be able to apply Thévenin and Norton's theorems<input type="checkbox"/> be able to design simple dc circuits
Learning Objectives	For each student to: <ul style="list-style-type: none"><input type="checkbox"/> understand characteristics of pn silicon, Schottky and LED diodes<input type="checkbox"/> understand small-signal and large-signal models of diodes<input type="checkbox"/> be able to design diode circuits<input type="checkbox"/> be able to design the Zener diode voltage regulator<input type="checkbox"/> be able to design a biasing circuit for MOSFETs<input type="checkbox"/> be able to design CS and CD amplifiers<input type="checkbox"/> be able to design a biasing circuit for BJTs<input type="checkbox"/> be able to design CE, CC, and CB amplifiers<input type="checkbox"/> be able to design amplifiers for mid-frequencies
Laboratory	This one credit laboratory course complements the three credit Electronic Devices lecture course, EE 331.
Computer Usage	None.
Estimated ABET	Engineering Science 0.5 credit hours or 50%

Category Content Engineering Design 0.5 credit hours or 50%

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Laboratory	This one credit laboratory course complements the three credit Electronic Devices lecture course, EE 331.