

Review: Zener Design Exercise (and intro to Part 6)

Session 5g for Electronics and
Telecommunications
A Fairfield University E-Course
Powered by LearnLinc

Module: Semiconductor Electronics

(in two parts)

- Text: “Electronics,” Harry Kybett, Wiley, 1986, ISBN 0-471-00916-4
- References:
 - [Electronics Tutorial](#) (Thanks to Alex Pounds)
 - [Electronics Tutorial](#) (Thanks to Mark Sokos)
- 5 - Semiconductors, Diodes and Bipolar Transistors
 - 5 on-line sessions plus one lab
- 6 - FETs, SCRs, Other Devices and Amplifiers
 - 5 on-line sessions plus one lab
- Mastery Test part 3 follows this Module

Section 5: Semiconductors, Diodes and Bipolar Transistors

- **OBJECTIVES:** This section reviews semiconductors, doping and junctions. The characteristics and application of Diodes and Bipolar Transistors are then studied.

Section 5 Schedule:

Session 5a	– 09/18	Semiconductors and Doping	Elect 1-7 1.23 – 1.39
MT2 Results	– 09/23	We'll discuss MT2	
Session 5b	– 09/25	Diodes	Kybett Chapter 2
Session 5c	– 09/30	Diode Applications	Kybett Chapter 11
Session 5d	– 10/02	Bipolar Transistors	Kybett pp 51 - 70
(lab - 10/05, Sat.)			
Session 5e	– 10/07	Transistor Amplifiers	Kybett pp 173 – 201
(Quiz 4 due 10/12)			
Session 5f	– 10/16	Review (Discuss Quiz 4)	
(Oct 14 is a holiday)			
Session 5g	- 11/13	Zener Design Exercise	Email Hand-Out
	11/15		
	01/06		

Learnlink 6

- New Features
- User interface changes
- Kathy Vlahos

Zener Diode Design Exercise

A Shunt Regulator

- We'll use AppShare to discuss the exercise

Section 6: FETs, SCRs, Other Devices and Operational Amplifiers

- **OBJECTIVES:** This section reviews additional important semiconductor devices and their applications. The Operational Amplifier is also studied.

Section 6 Schedule:

Session 5h	– 01/13	Review and Intro to Section 6		
Session 6a	– 01/15	Field Effect Transistors	Kybett	pp 70 – 77,
Session 6b	– 01/20	Transistors as a switch		pp 201-209
Session 6c	– 01/22	SCR's, Triacs and UJTs	Kybett	pp 78 –107
Session 6d	– 01/27	Class “A”, “B”, and “C” Amps		
		(Lab - 02/01, Sat.)		
Session 6e	– 02/05	Op-Amps	Kybett	pp 209-215
Session 6f	– 02/10	Review for Quiz 6		
		(Quiz 6 due 02/23)		
Session 6g	– 02/24	Discuss Quiz 6		
Session 6h	– 02/26	Review for MT3		
MT3	– 03/02	MT3 Exam		
Session 6I	– 03/10	Discuss MT3		