

# Mastery Test Part 4 Results

## Digital Electronics

Review Session 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

# Digital Electronics Topics

- Logic Gates and Boolean Algebra
- Truth Tables
- Binary Numbers
- Memory
- Flip-Flops

Part 7

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- Clocks and Counters
  - Shift Registers
  - Decoders
  - Multiplexers & Demultiplexers
  - Sampling and Nyquist

Part 8

# Section 7 Schedule

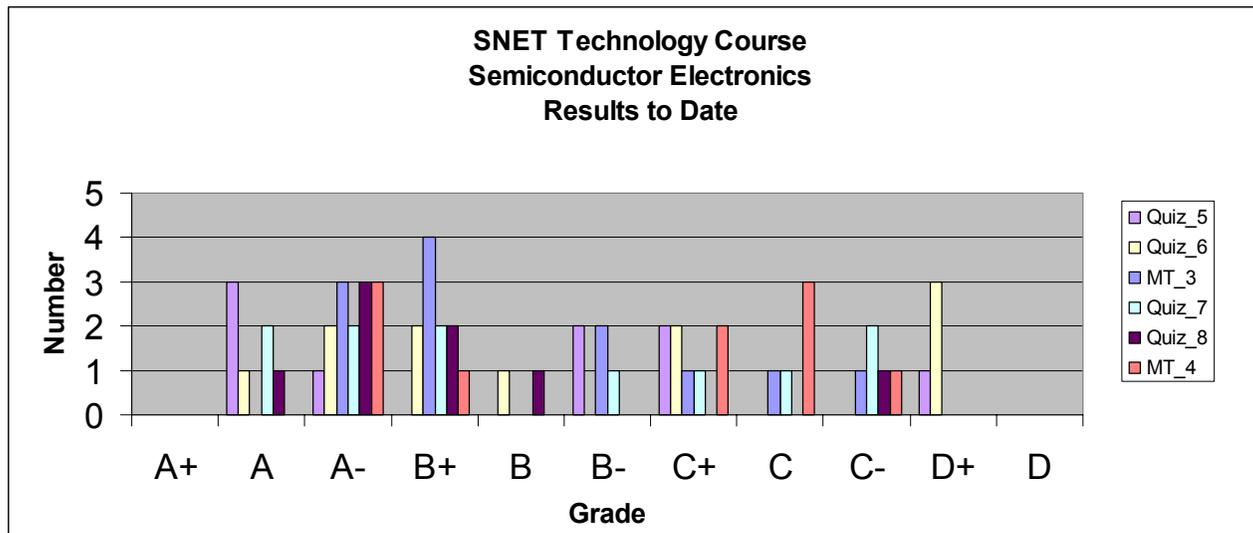
Session 7a	03/05	Introduction: Binary, Logic Gates and Boolean	Alex Pounds: Part 10 “Ken B”: Home, Basic Gates, & Boolean Algebra
Session 7b	03/10	Logic Gates and Truth Tables	Alex Pounds: Part 10 “Ken B”: Derived Gates, Xor
Session 7c	03/12	Binary numbers	“Keb B”: Binary Addition “Vinay “: Binary Numbers
Session 7d	03/17	Memory: The Latch, Registers, RAM & ROM	“Ken B”: RS Nand Latch, Clocked RS Latch, D Latch
Session 7e (Lab - 03/22, Sat.)	03/19	Pulses, Clocks and Flip-Flops	“Ken B”: RS Flip-Flop, JK Flip-Flop, D Flip-Flop, Flip-Flop Symbols
Session 7f (Quiz 7 due 03/30)	03/24	Review for Quiz 7	
<b>Session 7g</b>	<b>03/31</b>	<b>Quiz Results</b>	

# Section 8 Schedule

Session 8a	04/02	Clocks and Counters	“Hookey”: “Counter” pages Alex Pounds: Part 27
Session 8b	04/09	Shift Registers	“Hookey”: “Register” pages
Session 8c	04/14	Decoders	“Hookey”: Decoders and Demultiplexers
Session 8d	04/16	Multiplexers and Demultiplexers	“Hookey”: Multiplexers, Decoders and Demultiplexers
Session 8e	04/21	Sampling (A/D & D/A)	Notes
Session 8f (Quiz 8 due 04/27)	04/23	Review for Quiz 8	
Session 8g	04/28	Quiz Results	
<b>Session 8h (Lab - 05/03, Sat.)</b>	<b>04/30</b>	<b>MT4 Q&amp;A</b>	
MT4 (Sat, Cheshire)	05/10		
MT4 Results	05/12		

# Quiz Results to Date

- The class had a B- to B average – Nice Job.
- Some of you are not turning in your quizzes.

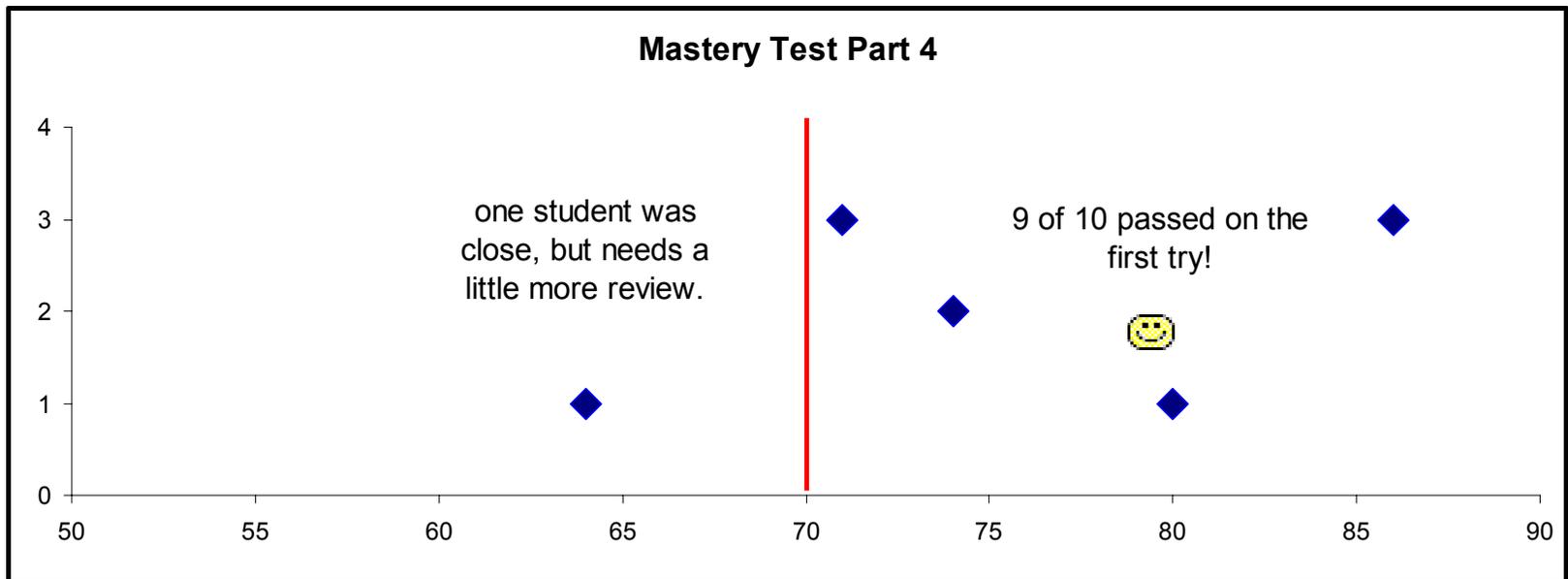


# Mastery Test: Part 4

- Saturday, 3 April 2003 – Fairfield: 3 students
- Saturday, 10 April 2003 – Cheshire: 6 students
- Monday, 12 April 2003 – Fairfield: 1 student
- 10 of 12 students have taken MT4 to date
- 50 multiple choice questions – 2 points each

# MT4 Results

- Here is the distribution of MT4 grades for “Digital Electronics”
- 9 of the 10 students taking the class passed with a 70 or better; Great job!



# Mastery Test Part 4

- Let's go to the exam itself via AppShare and discuss the answers
- This part of the session will not be available for recorded review

# Section 9:

## Digital Communication Systems 1

- Computer Architecture
  - Memory
    - ROM
    - RAM
    - Cache
    - Parity / ECC
  - CPU: Structure and operation
  - I/O: Serial, Parallel, SCSI, IDE, USB, Firewire
  - Secondary Storage: Floppy, Hard Drive, CD/DVD

# Section 9 Preliminary Schedule

Session 9a	05/21	Introduction: Computer Overview	Capron: Ch 1
Session 9b	05/26	The Central Processing Unit (CPU)	Capron: Ch 2
Session 9c	05/28	I/O	Capron: Ch 3
Session 9d	06/2	Data Storage	Capron: Ch 4
Session 9e	06/4	Digital I/O: Serial, Parallel, IDE, SCSI, USB, and Firewire	Bigelow: pp. 285-288, 301-305 Notes
Session 9f (Lab - 06/14, Sat.) (Quiz 9 due 06/15)	06/9	Review for Quiz 9	
Session 9g	06/16	Quiz Results	

# Section 10:

## Digital Communication Systems 2

- Serial I/O: RS232
- Modems
  - Modulation
  - Data Compression
- Digital Telephony Transmission Systems
  - T1 & T3
  - ISDN
  - Packet Transmission: LANs, Frame Relay and ATM
  - Fiber Optics: SONET