

©2006 CSU, Chico Department of Electrical and Computer Engineering

EECE 344: Digital Systems Design; PREREQUISITE(S): EECE 144, EECE 221 ; EITHER EECE 110 OR EECE 211 & EECE 211L
Spring Semester 2006

Instructor: [Dr. Albert O. Richardson](mailto:arichardson@csuchico.edu) ; 309 OCNL. 530-898-4958 arichardson@csuchico.edu

Office Hrs: M,W, 10:00AM—11:50AM F. 10:00AM—10:50AM

Class Schedule:

Lecture	M,W,F	1:00-1:50PM	OCNL 121
Activity 02	T	2:00-3:50PM	OCNL 346
Activity 03	Thurs.	2:00-3:50PM	OCNL 346

Textbooks:

1. **Alan Clements: “Microprocessor Systems Design, 68000 Hardware, Software, and Interfacing”, 3rd Ed., 1997, PWS Publishers**
2. **John B. Peatman: “Embedded Design with the PIC18F452 Microcontroller”, Prentice Hall 2003**

Reverences: Class Lect. Notes/Lab. Packet; Manufacturers' Web Sites(Device Specs.).
Harman & Hein, “The Motorola MC68000 Microprocessor Family”(Assy. Language).

Topics:

Topic	Clements Text & Lect. Notes
Microcomputer Hardware Overview	Sec. 1.1-1.2 ; Notes: 19-21
CPU Module-address, data, and control busses. Memory & I/O Interface. Clock, Reset circuits.	Sec. 4.1 ; Notes: 22-44
Read/Write Timing.	Sec. 4.2 ; Notes: 57-60
Address Decoding.	Sec. 5.1, 5.2 ; Notes:78-86
Review and TEST # 1	Notes, Homework Solutions
More Examples of Address Decoding	Notes, Design Examples
RAM/ROM Technologies	Sec.5.3; Notes: 72-77
Input-Output Port Design. Hand Shaking. Polled I/O.	Sec.8.3; Notes: 61-71a
Software & Assy. Lang. Program Review. Device Drivers. Parallel Printer. A/Ds and D/As	Sec. 2.1-2.7, Sec.8.3; Notes: 7-18, 87-93, 101-108
Review and TEST #2	Notes & Homework Solutions
Digital-to-Analog Converter(D/A). Analog-to-Digital Converter(A/D)	Notes: 87-93, 101-108

Serial Communications	Sec.9.1,9.2 ; Notes: 109-120
Exception Processing	Sec.6.1-6.4 ; Notes: 121-139
Microcontrollers	Peatman, Chs.1 thru 7
Microcontrollers	Peatman , Appendix A1-A10
FINALS WEEK	May 15-19

Homework: Late assignments will be discounted by 25%.

Grading Policy:

Two Midterm Tests	25%
Homework, Class/Lab. attendance and participation	15%
Activities/Lab. Project	35%
Final Exam	25%

Attendance Policy:

After three class/lab absences, each absence results in a 1.5% grade loss.