

EE 3750 — Microprocessor Systems

Spring 2004

Course time: 9:40-10:30 MW

Text: B. B. Brey (2002), *The Intel Microprocessors: 8086/8088, 80186/80188, 80286, 80386, 80486, Pentium, Pentium Pro Processor, Pentium II, Pentium III, Pentium 4: Architecture, Programming, and Interfacing*, 6th ed., Prentice Hall.

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Office Hours: 8:30-9:30 and 10:30-11:00 MW
9:00-11:00 F or by appointment

Description: Theory and design of microprocessors; semiconductor technologies, architectures, assembly language, software development, input/output design, applications, and interfacing.

Instructional Outcomes:

At the end of the course, a student should be able to:

- explain the function of the various blocks of the Intel 8086 architecture, calculate addresses, and generate machine code for given assembly instructions
- create assembly language instructions to perform arithmetic operations, logical operations, and bit manipulation on individual data elements and arrays of data
- implement the control structures of pseudocode and flow charts in an assembly language instruction sequence
- create procedures and efficiently pass data to and from procedures
- create assembly language instruction sequences to input and output data under program control and in response to interrupt requests
- design the hardware and software for a system including an 8086, multiple I/O devices, serial and parallel peripheral interfaces, and a programmable interrupt controller.

Grading:

4-5 Homeworks	20%
2 Tests	50%
Final	30%

Prerequisites: CSC 1253 and EE 2730

Policy on Exams and Homeworks:

1. Each homework assignment is due by the end of class on the date indicated in the assignment. Assignments submitted after that will not be graded and will automatically receive a 0.
2. There will be no make-up exams or homeworks, except under extenuating circumstances.

Important Dates: Expected dates for tests:
Test 1 — Wed., March 10
Test 2 — Wed., April 21