

ECE 511 MICROPROCESSORS

Fall 2008 M 16:30 - 19:10 R Room A243

Prof.Daniel Tabak, ST2 Rm.235, dtabak@gmu.edu

Office hours: M W 14:00 – 15:00

Prerequisite: ECE 445 or equivalent

COURSE OUTLINE:

- 1.Introduction to Microprocessors [1, Ch.1]
- 2.Microprocessor Architecture [1, Ch.2-6]
- 3.Memory Interface [1, Ch.10]
- 4.I/O Interface [1, Ch.11 – 13,15]
- 5.Advanced Intel Microprocessors 80486,Pentium 4, Core 2 [1, Ch.17 -19]
- 6.Pipelining [3, Ch.6]
- 7.RISC [2, Ch.6]
- 8.Examples of RISC Microprocessors: Sun SPARC [2, Ch.16; 5], MIPS [2, Ch.17; 4]
- 9.Introduction to Instruction Level Parallelism (ILP). ILP implementation in Pentium 4 and Core2.

MAIN TEXT:

- 1.B.B.Brey, The Intel Microprocessors, 8th ed., Pearson/Prentice Hall, 2009
ISBN 0-13-502645-8

REFERENCES:

- 2.D.Tabak, Advanced Microprocessors, 2nd ed., McGraw Hill,1995.
- 3.D.A.Patterson, J.L.Hennessy, Computer Organization and Design, 3rd ed., Elsevier, 2007.
- 4.R.L.Britton, MIPS Assembly Language Programming, Pearson/Prentice Hall,2004
- 5.D.L.Weaver, T.Germond, The SPARC Architecture Manual, Prentice-Hall, 1994

STUDENT EVALUATION:

Midterm 1 M Oct.6,2008 (35%)

Midterm 2 M Nov.24,2008 (35%)

Term paper, assigned to a team of two. Due: M Dec.1,2008

All exams are open material. Term papers should be word processed, presented on stapled paper (no binding), one copy per team.

TA: Mr.Marcin Rogawski. Office hours:

Thursday 5 - 7pm, ST2, Room 220