ECE 445  Computer Organization

Fall 2008  M W  15:00 – 16:15  Robinson Room B111

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

Office Hours:  M W  14:00 - 15:00

Prerequisite:  ECE 331 (grade C or better)

COURSE OUTLINE:

1. Introduction to Digital Computers. [Ch.1]
2. Instruction formats and addressing modes. The MIPS system. [Ch.2]
3. Computer Arithmetic. [Ch.3]
4. Computer control: hardwired and microprogrammed. [Ch.5]
5. Pipelining. RISC design approach. [Ch.6]
6. The memory hierarchy. Cache. Virtual Memory. [Ch.7]
7. Input/Output (I/O). [Ch.8]
8. Introduction to Instruction Level Parallelism (ILP). Superscalar and Superpipelined computing.

MAIN TEXT:


GRADING:

Project 1: due W Sept.24,2008 (10%)
Project 2: due W Nov.5,2008 (15%)
Project 3: due W Dec.3,2008 (10%)

Midterm: W Oct.8,2008 (30%) open material

Final examination: M Dec.15,2008, 13:30 (35%) open material

Projects will be managed and graded by the TA. Midterm and Final will be graded by Prof. Tabak. Late projects will not be accepted. Failure to show up at a scheduled examination, means, by the ECE Dept. regulations, a zero grade.

TA for Projects:
Mr. Chetthan Ananth (cananth@gmu.edu) office hours:
   Tuesday 7:30-8:30pm ST2 Room 265
   Wednesday 7:30-8:30pm ST2 Room 265