ECE 611    ADVANCED MICROPROCESSORS
Spring 2009    M  4:30 – 7:10 pm   W   Rm.1001

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Office hours: by appointment
Prerequisite:  ECE 511

The course continues with topics discussed in ECE 511. Since the main computing system of GMU is a Sun Microsystems Sun Fire V890, the main examples in this course will be Sun Microsystems chips.

COURSE OUTLINE:
1. Introduction: development of microprocessor families. Week 1, 1/26
2. Quantitative analysis of Pipelining. Week 2, 2/2
3. Multithreading. Week 3, 2/9
4. Quantitative analysis of multicore processors. Week 4, 2/16
5. Instruction Level Parallelism (ILP). Week 5, 2/23
6. Advanced Sun Microsystems chips. The UltraSPARC generations I - IV. Week 7, 3/16
7. The Sun Microsystems Multicore chips T1, T2, Victoria. Week 8, 3/23
8. The Sun Microsystems multiprocessors Sun FIRE V490, V890. Week 9, 3/30
9. Intel advanced microprocessors Pentium 4, Pentium M. Weeks 10,11, 4/6,13
10. Intel - Hewlett Packard (HP) IA-64 architecture. The Itanium realization of IA-64. Weeks 12,14, 4/20, 5/4

REFERENCES:
4. Sun Microsystems Website material.

Student Evaluation:
Midterm 1: M March 2,2009 (35%). Week 6
Midterm 2: M April 27,2009 (35%). Week 13
Some term papers might be presented. A paper copy should be submitted on due date. An electronic copy to be e-mailed to dtabak@gmu.edu.