Computer Architecture **Spring, 2010**

4190.308 (002) **CSE (Jihong Kim)**

Course Information

March 3, 2010

■ Course Goal

▷ This course introduces key components of modern digital computers, focusing on their functionalities and interactions. The course provides basic knowledge for building modern high-performance computer systems, emphasizing various design techniques.

■ Instructor and TA

▷ Instructor: Jihong Kim 김지홍 (office: Room 328 @Building 302)
Email: jihong@davinci.snu.ac.kr Phone: 880-8792
Office hours: M 3:30 ~ 4:30 p.m. (or by appointment)

▷ TA: 김학봉 (315-2 @302, haknalgae@davinci.snu.ac.kr, 880-1861)
Office hours: Tue 2:00 ~ 3:00 p.m. (or by appointment)

■ Class Hours & Course Homepage

▷ Mondays and Wednesdays 9:30 ~ 10:45 @302-209-1

▷ Course homepage: http://davinci.snu.ac.kr/courses/ca/2010_1/

▷ Important notices regarding the course will be announced in the course homepage. Please visit the course homepage regularly.

▷ Lecture slides will be available before the lecture at the homepage.

■ Prerequisite

▷ Programming experience & logic design

▷ For programming assignments, you should be comfortable with C programming.

■ Textbook

▷ D. Patterson and J. Hennessy
Computer Organization & Design, 2/3/4 Edition,
Morgan-Kaufmann Publishers Inc., San Francisco, CA.

■ **Grading**

- ▷ Midterm: 25% (mid April)
- ▷ Final: 40% (early June)
- ▷ Assignments: 30%
- ▷ Quizzes: 5%

- ▷ Course Repeat Policy: the maximum grade is limited to A-.

■ **Course Outline**

- ▷ We will cover the following chapters from the textbook:
  1. Introduction, Motivation, Computer Abstraction & Technology (Chapter 1)
  2. Instruction Set Architecture, MIPS and SPIM (Chapter2 & Appendix A)
  3. Performance Measurements & Evaluation (Chapter 4)
  4. Simple Processor Implementation (Chapter 5)
  5. Pipelined Processor Implementation (Chapter 6)
  6. Memory Hierarchy (Chapter 7)
  7. I/O Systems (Chapter 8)
  8. Multiprocessor Overview (Chapter 9)

■ **Assignments (Tentative)**

- ▷ Five written/programming assignments

■ **Assignment Submission Policy**

- ▷ All the assignments SHOULD be turned in before the due date. Late submissions are accepted for the following two cases only with large penalties:
  - ▷ If your assignment was late by less than 8 hours, the penalty is 30% of the TOTAL assignment points.
  - ▷ If your assignment was late by less than 24 hours, the penalty is 60% of the TOTAL assignment points.

■ ***Cheating Policy***

For any type of cheating (e.g., copying others' assignments/programs, stealing an examination), if found, a grade of F will be assigned. For further disciplinary actions, the College of Engineering will be notified of the cheating activity.