Advanced Embedded Systems

(고급내장형시스템)

March 2, 2011

Course Goal

This course introduces key architectural components of embedded systems in the graduate level (using ARM architectures as an example), and explores various design optimization issues of embedded systems in depth (in particular various low-power design techniques). We also study some emerging systems issues related to complex digital systems design.

Instructor/TA

Instructor: Jihong Kim (Room 328 at Building 302)

Email: jihong@davinci.snu.ac.kr Phone: 880-8792

Office hours: M 11:00 – 11:50 @302-328 (or by appointment)

TAs: Tae-Jin Kim & Joo-Sung Kim (Room 315-2 at Building 302)

Email: {taejin1999, testype}@davinci.snu.ac.kr Phone: 880-1861

Office hours: TBD. @302-315-2 (or by appointment)

Class Hours & Course Homepage

- MW 14:00 – 15:15 @302-208
- Course homepage: http://davinci.snu.ac.kr/courses/emb/2011_1
- Mailing list: emb2011@davinci.snu.ac.kr
  - How to subscribe to the mailing list:

    Visit the course homepage for the detailed instruction.

Prerequisites

Undergraduate-level Computer Programming, Computer Architecture & Operating Systems

Advanced Embedded Systems **Spring 2011**
4541.669A **CSE (Jihong Kim)**

- **Recommended Textbooks:**

[Overview of Embedded Systems]

W. Wolf, *High-Performance Embedded Computing*, Morgan Kaufmann, 2007

W. Wolf, *Computers as Components*, Morgan Kaufmann, 2001

[ARM Architecture & Programming]

A. Sloss, D. Symes & C. Wright, *ARM System Developer's Guide*, Morgan Kaufmann, 2004

[Low Power Design Techniques]

S. Kaxiras & M. Martonosi, *Computer Architecture Techniques for Power-Efficiency*, Morgan & Claypool, 2008

- **Grading**
  - Exam: 30%
  - Assignments & Labs: 70%

- **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.