ECE 587 – HARDWARE/SOFTWARE CO-DESIGN  
Fall 2006

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Prerequisite: Fundamentals of logic design and computer architecture. Microprocessor, microcontroller and ASIC design. Familiarity with VHDL or Verilog hardware description languages.

Class Time: Monday: 6:25-9:05 PM

Class Location: E1 - 104

Office Hrs: Wednesday and Thursday: 2:00-3:00 PM SH 301  
You can also email me to make an appointment for any other time.

Class Home Page: http://www.ece.iit.edu/~eoruklu/courses/ece587

Required Textbook: “Specification and Design of Embedded Systems”  
ISBN: 0131507311

“Embedded System Design - A Unified Hardware/Software Introduction”,  
Frank Vahid and Tony Givargis  
John Wiley & Sons, Inc., 2002  
ISBN: 0471386782

References: “Hardware/Software Co-Design - Principles and Practice”  
J. Staunstrup and W. Wolf,  
ISBN: 0792380134

Course Objective: This course will cover the fundamental topics in HW/SW codesign and partitioning concepts in designing embedded systems. The emphasis will be on goals and methodology for partitioning hardware/software in embedded systems.
**Topics Covered:**
Introduction to embedded systems, models and architectures for system specification, specification languages, system behavior capture and implementation, algorithms and techniques for system partitioning & estimation and modeling methodologies.

**Grading:**
- Homeworks: 15%
- Midterm Exam: 30%
- Final Exam: 35%
- Class Project(s): 20%

**Homework Policy:**
Homework is due at the start of class. Late homework will not be accepted. Working together on homework is encouraged, but copying assignments will call for disciplinary action.

**Exam Policy:**
Makeup exams will not be given, except for extraordinary reasons. The final is comprehensive.