

EE 4342 Microprocessor System Design Project
Spring 2007
MW 5:30-6:50pm, 106NH (Classroom)
M or W 7:00-9:50pm, 148 NH (Lab)

Instructor:

Jason Losh, Ph.D.

jlosh@uta.edu

Office Hours will begin at 6:50pm MW in 148 NH.

E-mail is the quickest method of contacting me on non-class days.

Textbook:

Extensive references, datasheets, application notes, and class notes will be provided on the course web site at <http://omega.uta.edu/~jlosh/>.

Listserv:

Please sign up for the EE4342-L listserv to receive the latest updates (go to <http://listserv.uta.edu> for details)

Modified Catalog Course Description:

Design principles for digital and analog instrumentation utilizing open computer architectures (ISA) and proprietary microcontrollers. The course is intended to provide a comprehensive design experience in microprocessor- and microcontroller-based applications. Will include bus protocol analysis, timing design, simulation, prototype development, and physical debugging of digital circuits. Prerequisite: EE 3310, EE 3317, EE 3340, and senior standing.

Department Comments on the Course:

The Goal of the Capstone courses is to design and build a product. The faculty advisor rotates between the roles of coach and evaluator, but sets aside his role as technical instructor.

Course Topics:

- Course introduction and discussion of course objectives
- Presentation of previous projects
- Review of suggested topics
- Review of suggested microcontroller (PIC 18F4520) for projects
- Project specific lectures
- Weekly meetings with each team
- Project proposal presentations
- Mid-semester project presentations
- Final project presentations

Important Dates:

First Class (Wednesday, 1/17), Census Date (Wednesday, 1/31), Project Proposal Presentations (Wednesday, 1/31), Mid-semester Project Presentations (Wednesday, 3/7), Spring Vacation (Monday-Friday, 3/12-16), Last Drop Date (Friday, 3/30), Final Project Presentation (to be announced by department – likely Thursday, 5/3 or Friday, 5/4)

Performance Assessment:

- Grade scale: A (90-100), B (75-89), C (60-74), D (50-59), and F (0-49)
- Overall grade consists of Project (60%), Report (20%), and Presentations (20%)
- Project grade is computed as project operation (50%), project meets original specification (25%), appearance (10%), overall (10%), and time expended (5%)
- Report grade is computed as introduction (10%), theory of operation (20%), sample data (10%), discussion of Alternatives (5%), conclusion (10%), detailed schematics (15%), parts list (5%), budget (5%), software listing (10%), references (5%), format (10%), failure to keep engineering notebook (-20%),
- The instructor reserves the right to make reasonable changes in performance evaluation as needed.

Shared Graduate Teaching Assistant Lab Hours in 148NH:

Asma Al-Tamimi (EE6314), altamimi@arri.uta.edu, 5:30-10pm T, 5:30-7pm Th

Brijesh Chauhan (EE4342), brijesh.chauhan@uta.edu, 5:30-10pm MW, 7-10pm Th, and 5:30-9pm F

If the lab is empty as of 8:40pm (allowing ample time for students attending a 7-8:20pm class to reach the lab), the GTAs may leave the lab.

The lab may also be open for open lab hours M-F 9am-5:30pm subject to available staff.

Lab Orientation:

EE department policy requires that students utilizing 148NH attend a safety orientation session.

Cost:

No textbook will be required. The project cost is expected to be between \$100 and \$350 per team.

Academic Honesty:

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. "Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts." (Regents' Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22). ANY CHEATING WILL RESULT IN SEVERE PENALTIES. All work submitted must be original. If derived from another source, a full bibliographical citation must be given.

EE Department Policy requires that you sign and return a letter acknowledging the College of Engineering Ethics policy.

Americans with Disabilities Act:

If you require an accommodation based on disability, please feel free to meet with me during the first week of the semester to make sure that you are properly accommodated. Contact Dr. Cheryl Cardell (272-3670) or Mr. Jim Hayes (272-3364) for more information.