

Fall 2003 – CSE 207 Digital Design Course Information

Course Description

CSE207 is an introductory course to the fundamentals of digital logic design. I know that as a class, your individual backgrounds vary greatly. Some of you have never seen a digital circuit before and only know electricity by the painful zap you get when you reach for a doorknob in the winter while wearing your thick wool socks. Others of you may be experienced designers who took everything apart as a kid and figured out how everything worked. Even if you were skilled enough to figure out how to put everything back together, I believe you will still find this course challenging. I'm pretty sure none of you have attempted to build a microprocessor from scratch, but by the end of the term, you will.

Staff

Instructor	Barry E. Mapen	barry@engr.uconn.edu
Teaching Assistant	Hanan Elazhary	hanan@engr.uconn.edu
Teaching Assistant	Amal Abdel-Raouf	amal@engr.uconn.edu
Teaching Assistant	Chaitra Raghavendra	chaitra@engr.uconn.edu

Meeting Times

You are expected to attend all lectures and your discussion section. If you miss a class, be sure to talk with other students in the class to find out what material was missed. While missing an occasional class is understandable, missing every class and expecting the teaching assistants to provide private tutoring is unacceptable. Please remember, your teaching assistants are graduate students who are taking classes too.

Who	What	When	Where
Barry	Lecture – All	Monday/Wednesday 4-5:15p	UTEB 175
Hanan	Discussion – 02D	Wednesday 9-9:50p	ITEB 138
Hanan	Discussion – 03D	Wednesday 10-10:50p	ITEB 138
Chaitra	Discussion – 04D	Wednesday 11-11:50p	ITEB 138
Amal	Discussion – 05D	Wednesday 12-12:50p	ITEB 138

Office Hours

Since all teaching assistants will be working in CSE207 and CSE208W, they will be available to students in any section for any project. During the first discussion section, your teaching assistant will try to determine the best time for the majority of you. For those of you who cannot make your TA's office hours, you may set up a time to meet if you have questions, or visit another TA.

Who	When	Where
Hanan	Monday 1:30-2:30p	ITEB 221 or 138
Hanan	Monday 2:30-3:30p	ITEB 221 or 138
Chaitra	Wednesday 5:30-6:30p	ITEB 230 or 138
Amal	Thursday 12:00-1:00p	ITEB 221 or 138

My office hours will be immediately following class. I will be available via email the rest of the time. With rare exception I believe that you will find this to your advantage; I tend to answer emails all evenings and on weekends when you are probably busy working and your TAs will be unavailable. To the best of my ability, I will respond to any email within 12 hours. Generally, I respond much quicker outside of the 9-5 work day. Please put CSE207 at the start of the email subject heading (this will help me filter out the virus email coming from UConn and avoid accidentally deleting real questions).

Project Submissions

Projects are due at the start of class on the due date. Late submissions will be accepted up to 24 hours late with a 10-point penalty. After this time, projects will not be accepted without a medical excuse or prior approval from the course instructor. All files created or used for the project, including the final composite document, must be submitted by email or on a diskette along with the printed report. Your final written report *must* be printed out and submitted to your TA for grading and comments regardless of how you plan on submitting the rest of your work. I encourage everyone to submit all projects via email. To handle a large class, the following requirements must be followed to have a project count as submitted via email. All materials must be zipped (.ZIP) and emailed to *both* your TA and myself. Files must be named:

207_FA03_ProjectNumber_LastName_FirstName_Description.zip or
207_FA03_ProjectNumber_StudentID_Description.zip.

For example, if I were to submit the fourth project my file would look like

207_FA03_4_Mapen_Barry_Microprocessor.zip

Emailing only your TA or myself, or failure to use the above naming requirement, will not count as an electronic project submission. If you would prefer not to use email, you must submit a diskette (1.44MB 3.5" Floppy) to your TA with all of the required files. No naming conventions are required for files on the diskette, but please make sure you put your name on the label. Do not stick a post-it note to the surface since these always fall off.

NB: If you submit the project on time electronically, you have 24 hours to submit the printed copy of your report without penalty. Changes to the report are not permitted (i.e. it must match the copy you submitted electronically).

Academic Honesty

All work submitted must be created and implemented by you and only you. Any non-original work **MUST** be documented as such. As with any semester, personal events may set you back in your course work. Talk to me before deciding to take a shortcut and submitting someone else's work! Also, this course is time consuming and you may be helping to debug classmates' circuits. This is fine, but working together to create a common schematic or components is unacceptable. Help find the problem, and then get back to your own design.

Grading

This course focuses heavily on projects to prove that you understand the material presented. Exams will be used to test key concepts and your ability to design solutions. There will be four projects worth 10% 15% 15% and 20% in order, two exams worth 15% each, and a cumulative final worth 10%.

Syllabus

The following syllabus is the expected course pace. Changes may be made throughout the semester to keep the course load between 207 and 208W reasonable. The on-line version of this document will be kept up to date to reflect changes made.

Days	Topic(s)	Chapter	Project/Exam Status
Aug 25	Meet Barry and TAs, Introduction	1 & 2	
Aug 27	Number Systems and Codes	1 & 2	Project 1 assigned
Sept 1	No Class – Labor Day	2	
Sept 3		2	Project 1 Initial Design
Sept 8	Combinational Logic Principles	4	
Sept 10		4	Project 1 Functional Design
Sept 15	Minimization	4	
Sept 17		4	Project 1 Due, Project 2 Assigned
Sept 22	Design Practices, MSI Devices	5	
Sept 24		5	Exam #1, Project 2 Initial Design
Sept 29	MSI Devices	5	
Oct 1		5	Project 2 Functional Design
Oct 6	Cascading MSI Devices	6 & 7	
Oct 8		6 & 7	Project 2 Due, Project 3 Assigned
Oct 13	Sequential Logic Design	7	Project 2 Due, Project 3 Assigned
Oct 15		7	Project 3 Initial Design
Oct 20	Synchronous Design, Hazards	7 & 8	
Oct 22		7 & 8	Project 3 Functional Design
Oct 27	State Machines	8	
Oct 29		8	Project 3 Due, Project 4 Assigned
Nov 3	Counters	8 & 9	Project 3 Due
Nov 5		8 & 9	Exam #2, Project 4 Initial Design
Nov 10	Registers, Shift Registers	9	
Nov 12		9	Project 4 Functional Design
Nov 17	Modern Design Practices	9 & 10	
Nov 19		9 & 10	Project 4 Preliminary Report
Nov 24	No Class – Thanksgiving Break		
Nov 26	No Class – Thanksgiving Break		
Dec 1	Additional sequential considerations	10 & 11	
Dec 3	Wrap up and Review	10 & 11	Project 4 Due
Dec 8-13	Final Exam		Final Exam