

# CSE210W (Spring 2008)

## Digital Logic Design

**Instructor:** Z. Jerry Shi, ITE 365, 486-0599, [zshi@cse.uconn.edu](mailto:zshi@cse.uconn.edu).

**TA:** Ahmed Ebaid, [ahmed.ebaid@uconn.edu](mailto:ahmed.ebaid@uconn.edu).

**Schedule:** Lectures: Tuesday and Thursday, 2pm – 3:15pm, UTEB 175. Labs: ITE C31 Friday, 10am – 11:50am, 12am – 1:50am. Assessments: ITE C31 Thursday, 6:30pm – 8:30pm.

**Office Hour:** Instructor: Tuesday 3:30pm – 4:30pm. TA: TBD.

**Website:** <http://www.engr.uconn.edu/~zshi/course/cse210/> and WebCT Vista.

**Textbook:** John Wakerly, *Digital Design – Principles and Practices*, 4<sup>th</sup> Edition, Prentice Hall, 2005, ISBN: 0131863894. *No need to get an edition bundled with Xilinx software.*

**Course description:** The course includes the following topics. Representation of digital information. Analysis, design, and evaluation of combinational and sequential circuits. Debugging techniques. Use of computer facilities for circuit simulation, CAD, and report preparation and presentation. Introduction to structure and operation of digital computers. Design projects (written reports with revisions are required for each project).

**Prerequisite:** Secondary school physics or PHYS 101 or PHYS 151, and CSE 110C or CSE123C or CSE130C or CSE 133.

**Workload: Projects and Labs.** There are two large design projects, referred to as projects, of four weeks duration each. Additionally there are eight or nine smaller projects implemented and assessed in the lab. The small projects will be referred to as labs. Projects and labs will involve the use of computer tools including LogicWorks as well as prototyping and testing small digital circuits using SSI and MSI components. Students will work in teams in some of labs. There will be assessments and demonstrations of implemented labs. **Reports.** Student will submit a formal report for each of the projects and labs unless assignments indicate explicitly that reports are not required. The projects also require an interim reports, which will be marked and returned for revisions. These revisions will be incorporated into the final

project report. Grades for the revised reports will be used to compute the course grade. The grades for project and lab reports will be based on both writing and technical contents. *Each student must pass the writing component of the course in order to earn a passing grade.* Students should prepare an electronic version of the report and a hard copy. The electronic copy of the report and other files, such as your work in LogicWorks, should be placed into a single ZIP file and submitted on WebCT before deadlines (The zip function has been built in Windows XP. The zip command is also available on Engineering School's Linux servers such as fester). A hard copy of the report is also required.

**Homework.** There will be a homework assignment for each major topic (about six in total). You are encouraged to submit printouts although they are not required.

**Exams.** There will be two in-class exams and a final exam.

**Grading:** Your grade for this course will be based on the following components:

- Labs: 30%
- Projects: 10%
- Homework: 15%
- Two in-class exams: 15%
- Final exam: 25%
- Other: 5%

**Late Policy:** If a lab cannot be completed by the due date announced in class, you may arrange with the instructor or TA to submit a late report. Late reports without such an explicit arrangement will not be accepted. The penalty for late reports is 10% of the maximum points per day. For example, a lab report that is two days late and would get 80 points out of 100 will receive  $80 - 100 * 10\% * 2 = 60$  points.

**Academic integrity:** The instructor assumes all students are cognizant of the tenets of *The Student Code* on academic integrity in undergraduate education, which will serve as the guidelines for academic misconduct in the course.