EE 227 Digital Logic Design

Fall 2015

Instructor: Nouman Azam

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Lectures:
Time: Mon, Tue 11:00 am – 12:30pm

Office Hours:
Tuesdays 8:00 am – 11:00 am.

Contact:

By appointment (email me).

Texts

1. Logic and Computer Design Fundamentals by M. M. Mano and C. R. Kime (4th Edition)

2. Digital Fundamentals by Thomas L. Floyd (10th Edition)

Course Description

This is an introductory course in digital logic circuits covering number representation, digital encodings, Boolean Algebra, combinatorial logic design, sequential logic design, and programmable logic devices. The course will introduce the basic building blocks implementing various digital operations, and techniques mapping from specification to logic networks. Issues that need to be considered for digital designs will also be discussed. This course should prepare students for more advanced courses in computer system design, design automation, and other courses in computer science.

Syllabus

- Fundamentals of digital signals
- Number Representations
- Boolean Algebra and Boolean functions simplification.
- Signed and unsigned number representation, 1's and 2's complement.
- Combination Logic Circuits: adders, subtractors, multiplier, multiplexing, encoding and decoding.
- Combination Circuit Implementation

- Sequential circuits: Latches, flip flops, sequential circuit analysis, state diagrams and state tables.

Grading Policy

10% -- Assignments (3 -7)

10% -- Quizes (3-7)

30% - Sessionals

50% - Final examination.

Policies

1. Information about the course appears on Slate. Please make sure you check for the recourses regularly.

2. Your email might be caught as junk and I may not receive it. It's your responsibility to make sure that I receive your email. If you do not receive a response within 24 hours, try to send me a reminder. If that does not work as well, try to see me. Always mention your name, student number and course in your email for easy handling.

3. All assignments, slides and other materials will be posted on slate.

4. All assignments/proposals/reports should be handed in time. Late submissions are not accepted for any reason and will receive 0 points, except for extensions granted to the entire class. If you want to submit and I am not in office, just push it beneath the door of my office.

5. Any question regarding assignment submission or marking should be promptly addressed to me through email. In particular, any question/concern regarding marking should be submitted no later than seven days after the marks are posted.

6. All assignments should contain your name, student number and assignment number on the first page.

7. You can discuss the assignment with other students before writing up but MAY NOT read, copy, or exchange other student's code and material.

8. Attendance is required in lectures and labs. Little time is available to assist those who have missed relevant classes.

9. All exams are closed book and will be given during the regular lecture meeting time in the regular classroom.

10. You are mature students, so I expect that you will respect my time, and you will not raise concerns regarding attendance.