ENEE244: Digital Logic Design – Fall 2016 Course Syllabus
Lecture: M,W 12:30pm – 1:45pm, SPH 1303
Sections 0101-0105

Instructor: Joseph JaJa, 3433 A.V. Williams Bldg; 301-405-1925, josephj@umd.edu

Course Objectives: Students are supposed to learn the basic techniques and methodologies for designing and analyzing digital systems and how to apply these techniques to build specific circuits. Core topics covered include number systems, Boolean Algebra, combinational circuits, flip-flops and memory devices, sequential circuits, programmable logic devices and read-only memories, and various related optimization techniques.

Textbook: Digital Design, M. Morris Mano and Michael D. Ciletti, fifth edition, 2013, Pearson (required)

Core Topics:

1. Binary Numbers, Binary Arithmetic, and Binary Codes (Sections 1.2 – 1.7)
2. Boolean Algebra, Logic Gates, and Combinational Networks (Sections 1.8 – 1.9, 2.1 – 2.9)
3. Simplification of Boolean Expressions, Karnaugh Maps, NAND and NOR Gates (Sections 3.1 – 3.8)
4. Combinational Logic and Basic MSI Building Blocks (Sections 4.1 – 4.11)
5. Latches, Flip-flops. And Sequential Circuits (Sections 5.1 – 5.5)
6. Registers and Counters (Sections 6.1 - 6.5)
7. Memory, Programmable Logic, ROMs, PLDs, PLAs, and PALs (Sections 7.1 – 7.7)
8. Optional topics from Chapters 8 and 9 as time permits

Midterm I: Wednesday, October 12; Midterm II: Wednesday, November 16; Final: Monday, Dec. 19 (8-10).

No exam make-up will be given except for serious documented illness.

Homework and Quizzes: Weekly (no late homework will be accepted).

Course Grade: Homework and Quizzes (10%), Midterms (56%), Final (34%).

Office Hours: M, W 3:30-5, or by appointment

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit http://www.studenthonorcouncil.umd.edu/whatis.html .