UMBC CMPE 212 Digital Analysis and Design
Fall 2015

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Textbook : ``Digital Logic Circuit Analysis and Design'' by Victor P. Nelson, H. Troy Nagle, Bill D. Carroll and J. David Irwin, Prentice Hall, 1995.

Other reference material
(As far as possible, material not included in the textbook will be made available either via the web or will be on reserve in the library.)

- ``Digital Design, Principles and Practices'', by John F. Wakerly, 3rd Edition, Prentice Hall 2001, ISBN : 0-13-089896-1

- ``Switching and Finite Automata Theory'', by Zvi Kohavi, McGraw Hill, 1978. This is a classic book on switching theory.

- Verilog: there are a large number of tutorials and manuals on line.

Topics to be covered

- Introduction
- Number systems and codes (Chap 1)
- Combinational Logic (Chaps 2, 3) (Switching algebra, Simplification of switching functions, hazards)
- Combinational logic design practices and examples (Chaps 4 and 5)
- Sequential logic (Chap 6)
- Sequential logic design examples (Chap 7)
- Analysis, Simplification and synthesis of sequential logic (Chaps 8,9)

Evaluation :

1. Two Mid term exams, 20% each. (non cumulative)
   Exam 1: in the 3rd week of October
   Exam 2: in the last week of November

2. Final (cumulative) 30%

3. Homeworks 10%

4. Lab 20% (follow the Lab link on the course web page for more info.)

Goals of the Course : To develop an understanding of the fundamentals of digital logic analysis and synthesis.

ABET Accreditation : You are expected to participate (ex., by filling surveys in a timely manner whenever requested)
in the continual monitoring, assessment and improvement of the education you are receiving.
ABET requires the demonstration of such closed-loop continual evaluation and enhancement process(es) at work throughout the curriculum in a program in order for that educational program (such as the BS in CS or CMPE) to be Accredited(blessed).

For a brief intro to what is ABET follow this link: ABET and how it relates to 212

Academic Conduct :

UMBC's **Academic Integrity** policy and standards set forth in the hyperlinked documents must be adhered to.
