

Assessment Questionnaire

It is important to the department and the faculty teaching this course to receive this assessment questionnaire from students. Please complete it and turn it in to the faculty the week before the finals.

How well the course has met its objectives?

Please circle your answer: 1 (excellent) to 5 (poor)

1. To learn the fundamental structures and behavior of logic components, combinational and sequential.

1 2 3 4 5

2. To develop the ability to analyze and synthesize digital circuits and systems.

1 2 3 4 5

3. To develop the basic understanding of computing hardware (adders, ...).

1 2 3 4 5

4. To develop the ability to design basic digital systems for real life applications.

1 2 3 4 5

Catalog Description

CDA3201C Introduction to Logic Design

4 Credits

Prerequisite: COP2210 or COP2200 or COP2212 (strictly enforced)

Fundamentals of logic design, Boolean algebra, simplification of Boolean expressions, design of combination circuits, design with SSI and MSI logic ICs including PLDs. Flip flops, analysis and synthesis of sequential circuits, design with MSI and LSI logic ICs. Appropriate CAD tools/simulation and training kits will be used in the lab to build logic circuits. You will be charged \$12 for lab fees.

Lab

The course includes lab experiments, some using the simulating software, WinBreadboard, and some using actual logic chips and the training kit in the lab. You need to buy your own portable breadboard on which you will assemble your circuits. In the lab, you connect your circuit to the trainer for testing and grading. You must read the instructions and regulation on my web site. Late labs up to a whole week are graded with 50% off, and after a week no grades.

Course Outlines

1. Number Systems and the Basics of Combinational Systems
2. Switching Algebra and Logic Circuits
3. More Algorithmic Simplification Techniques (primarily Karnaugh Map)
4. Solving Larger Problems
5. Sequential Systems
6. Solving Larger Sequential Problems
7. Simplification of Sequential Systems (time permitting)