Introduction to VLSI Circuits Design

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Instructor

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Meeting Lecture

13:30–16:30 Tuesday/Wednesday, ED 111
13:30–16:30 Thursday (7/6, 8/10), ED 111

Lab

13:30–16:30 Thursday (7/13, 7/20, 7/27, 8/3), ED 713

Course Website

http://vlsi-eda.cm.nctu.edu.tw/course/VLSI_06summer/index.html

Prerequisite Knowledge

Logic design, Circuit analysis, Basic solid state device concepts and models

Teaching Assistant

Cheng-Chung Chien (ken3020222.cm94g@nctu.edu.tw)
Office: ED718
Phone: 03-5712121 ext 54586

Text Book:


References:


CAD Tools

• H-Spice: Circuit Simulation
• Virtuoso: Layout Editor
• Calibre: DRC

Topics Covered

• Introduction, Fabrication, and Layout
• MOS Devices
• MOS Inverters: Static and Dynamic Characteristics
• Interconnect Parasitics
• MOS Logic Circuits
• Dynamic MOS Logic Circuits
• Memories
• Low-Power CMOS Logic Circuits
• Design for Manufacturability and Testability (if time is allowable)

Grading Policy

Homework assignments 15%
Labs 25%
Midterm 30%
Final 30%

!!!You are bound by honor code. Discussion of assignments and homework is encouraged, but you must turn in your own work.