EE Dept. NCKU

應用導向 VLSI 晶片設計

Application Specific Integrated Circuit Design

Syllabus

Instructor: Ming-Der Shieh (謝明得)
Office: 95509, (Tel): 06-2757575 ext. 62364 (email: shiehm@mail.ncku.edu.tw)
Office hours: (Tue) 15:00 ~ 17:00
Classes: 92283, (Wed) 15:10 ~ 18:00 (2010)
Handout Website: http://vlsilab.ee.ncku.edu.tw/ 教學課程 with password

Text Book:

References:
8. 教育部聯盟開發之教材.

Course Description:
This course will go through the fundamentals of Application-Specific Integrated Circuit (ASIC) design flow and the basic techniques to design an ASIC from architectural to physical level. Students will also learn how to develop and evaluate the data path and control path to optimize their design according to a given specification.

Prerequisite:
Basic VLSI Design, Fundamental Logic Design & HDL-related courses

Outline:
1. Introduction
2. ASIC design flow
3. CMOS logic and cell library
4. Logic and physical synthesis
5. Arithmetic logic unit design
6. Memory design
7. VLSI architecture
8. Conclusion

Grading:
The final grade will be computed on the basis of the following weights.
1. Homework and Lab 40%
2. Minterm 30%
3. Final examination 30%