Application Specific Integrated Circuit Design
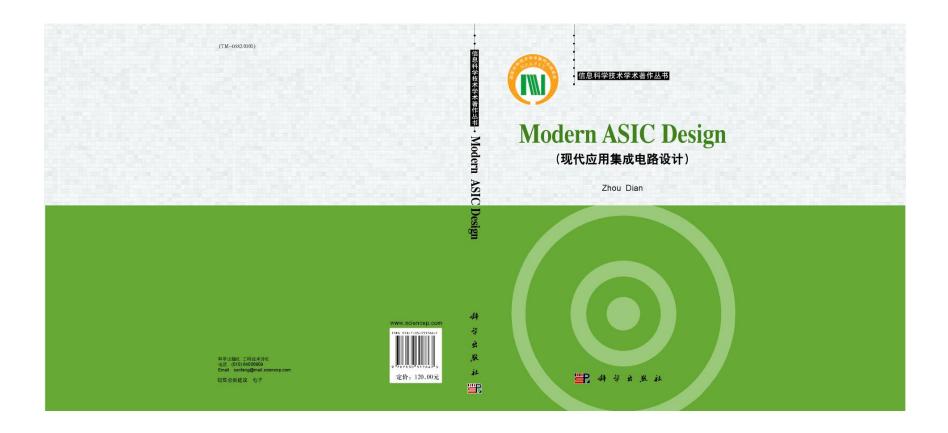## August 22, 2016

Topics

This course discusses the design of Application Specific Integrated Circuits (ASICs). Specific topics include: VLSI design flow, custom and semi-custom IC structures, synthesis and CAD tools, system specification development, and the implementation of a digital signal processing (DSP) chip.

Prerequisite

This course is designed for the first or second year graduate students. Attendants should have taken the undergraduate senior or graduate lever courses in the area of VLSI design, VHDL and C language, and have the basic knowledge of VLSI CAD tools.

Text book

"*Modern ASIC Design*", by Dian Zhou, ISBN 978-7-03-031766-7, Science Press, China, 2011.

Modern ASIC Design

（现代应用集成电路设计）

Zhou Dian

www.sciencep.com

科学出版社

定价: 120.00元

Reference

"*Modern VLSI Design*," by Wayne Wolf, Prentice Hall, ISBN 0-13-061970-1.

"*Application-Specific Integrated Circuits*," by Michael John Sebastian Smith, Addison-Wesley Publishing Company, ISBN 0-201-50022-1.

"*VLSI Design*," by Michael Vai, CRC Press, ISBN 0-8493-1876-9.

"*Principles of CMOS VLSI Design*," Neil H. E. Weste and Kamran Eshraghian, ISBN 0-201-53376-6.

Policy

- Attendance is required.
- Homework and project reports need to be handed in before the due time.
- There will be a middle term and a final project.
- There will be three reading and writing assignments.
- To see the instructor other than the class meeting time, please make appointment.
- Grading
  - Distribution: attendance 2%, presentation 3%, homework 20%, middle term project 25%, and final project 50%.
  - 85-89 ->A-, 90-94 ->A, 95-100 ->A+,70-74 >B-, 74-79 ->B, 80-84 ->B+, 60-64->C, 65-69->C+, and below 60 ->F.

Instructor information

- Name: D. Zhou
- Office: ECN 4. 610
- Email: zhoud@utdallas.edu
- Phone: (972) 883 4392

Instructor office hour

- Wednesday 2:00pm-3:00pm
- Make appointment if you need to see the instructor or TA other than the office hour

TA office hour

- Name: Zhaori Bi
- Email: zxb107020@utdallas.edu
- Office: ECSN 3.516
- Office hour: NA
- Website: www.utdallas.edu/~zxb107020/ (All course related materials will be posted on the webpage and please check it regularly.)