PRE-MIDTERM REVIEW
Course Workload

• 5 unit course
• Upper division
• New ways of thinking of things requires effort
  – Algebra: use variables
  – Calculus: no concrete solutions for indefinite integrals
  – Digital Design (EEC 180)
    • HDL—a new way of writing “code”
    • Autonomous hardware: datapaths, memory, control
    • Sophisticated controllers
• Passing this course requires significant time and effort
Course Plan: Tools and Methodologies for Large-Scale Digital Designs

- Introduction
- The Verilog hardware description language (HDL)
- Digital arithmetic
  - Number formats
  - Addition / Subtraction
  - Later in quarter: Multiplication, saturation, and rounding
- Flip-Flops
- Control circuits: counters and general FSMs
- Clocks
- Interface circuits
- Memories
Book + Lectures + Handouts + Laboratory

• The main body of material is presented in the book, lectures, and handouts

• Generally speaking, the labs *complement* the main material
  – They go into a much greater depth on specific topics
  – They give design experience
  – They give significant practical application of theory

• The Quizzes, Midterm, and Final Exam generally focus on the main body of material
Quizzes and Exams
Notes from the course web page

• “Quizzes, the midterm, and the final exam will cover material from:
  – Lectures,
  – Assigned readings (including handouts),
  – Labs, and
  – Homeworks.

• Some material may be present in only one of these sources”
Book + Lectures + Handouts + Laboratory

- Breadth and Depth
Handouts

• The handouts are copies of most of my lecture notes
• The material in the Handouts posted on the course web page includes some of the most foundational material
• There is a pretty high expectation that you understand this material and are proficient in applying it
• When the handouts or lectures and the textbook disagree on something, follow the handouts and lectures