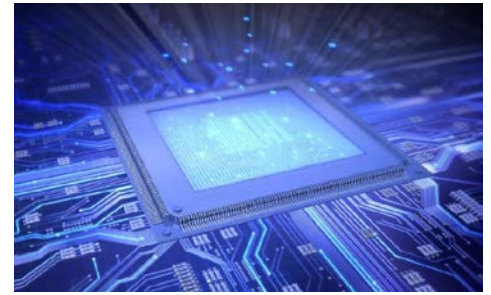
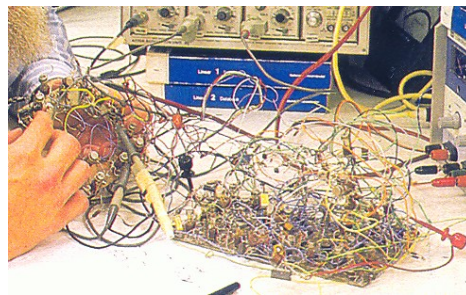
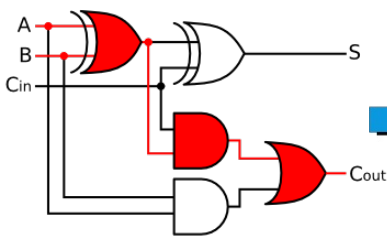


Summer 2018 – Fully Online Digital Logic Course Offerings

Montana State University - Bozeman

Instructor: Dr. Brock J. LaMeris



Do you want to earn up to 8-credits toward your EE/CpE degree while you're off-campus this summer? Then these fully online courses are for you!

EELE 261 – Introduction to Logic Circuits

4 credits, Session 2, 6/11 – 7/6

Course Description

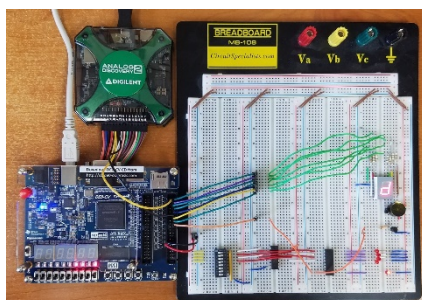
This course introduces the concepts of classical digital logic design including number systems, interfacing, Boolean algebra, combinational logic design, and finite state machines. This course also covers Hardware Description Languages (VHDL) for the structural design and simulation of digital systems. The course includes a laboratory component where students gain experience building logic circuits using both discrete and programmable logic devices.

Course Outline

- Ch 1. Analog vs. Digital
- Ch 2. Number Systems
- Ch 3. Digital Circuitry & Interfacing
- Ch 4. Combinational Logic Design
- Ch 5. VHDL (part 1)
- Ch 6. MSI Logic
- Ch 7. Sequential Logic Design

Lab Logistics

Build logic circuits using discrete components on a breadboard and take measurements with a portable instrument containing a scope, DMM, AWG, power supply, and logic analyzer.



EELE 367 – Logic Design

4 credits, Session 3, 7/9 – 8/2

Course Description

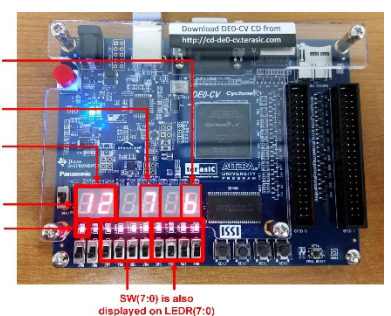
This course covers digital logic design and is a continuation of EELE 261. The course covers behavioral modeling of digital systems using a hardware description language (VHDL). Topics include finite state machines, arithmetic circuits, memory systems, and computers. The course includes a laboratory component where students gain experience implementing large digital systems on an FPGA.

Course Outline

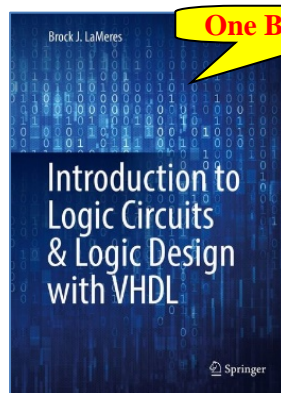
- Ch 8. VHDL (part 2)
- Ch 9. Behavioral Modeling of Sequential Logic
- Ch 10. Memory
- Ch 11. Programmable Logic
- Ch 12. Arithmetic Circuits
- Ch 13. Computer System Design

Lab Logistics

Implement VHDL designs on an FPGA culminating with the implementation of a full 8-bit microcomputer.



Check out a Portable Lab Kit to Cover Both Classes



One Book, Two Courses