Computation Structures 1: Digital Circuits

Resume course

Collapse all

Course Overview and Tool Documentation

- Welcome to 6.004.1x!
- Jade Documentation
- Jade Sandbox

Entrance Survey

- Course Entrance Survey

1. Basics of Information

- Lecture Videos (38:24)
- Worked Examples
- Tutorial Problems

2. The Digital Abstraction

- Lecture Videos (33:54)
- Worked Examples
- Tutorial Problems

Assignment 1 (due Oct 17)

3. CMOS

- Lecture Videos (44:58)
- Worked Examples
- Tutorial Problems

4. Combinational Logic

- Lecture Videos (47:49)
- Worked Examples
- Tutorial Problems

Assignment 2 (due Oct 24)

- Lab 1: CMOS Gates (4 Questions)
  Lab due Oct 25, 2016, 7:59 AM GMT+8
- Lab 2: Combinational Logic (4 Questions)
  Lab due Oct 25, 2016, 7:59 AM GMT+8

5. Sequential Logic

- Lecture Videos (37:09)
- Worked Example
- Tutorial Problems

6. Finite State Machines

- Lecture Videos (42:27)

Course Tools

Bookmarks

Important dates

Wed, Nov 16, 2016

Course ends

This course is archived, which means you can review course content but i

View all course dates

Course Handouts

- Syllabus

Lecture slides (pdf)

1. Basics of Information
2. The Digital Abstraction
3. CMOS Technology
4. Combinational Logic
5. Sequential Logic
6. Finite State Machines
7. Performance Measures
8. Design Tradeoffs

6.004 Handouts

- Jade Frequently Asked Questions and Tips
- The Standard Cell Library

edX Handouts

- Discussion Forum
- Formula Response

Worked Examples

Tutorial Problems

Assignment 3 (due Oct 31)

Lab 3: FSMs (3 Questions)
Lab due Nov 1, 2016, 7:59 AM GMT+8

7. Performance Measures

Lecture Videos (33:12)

Worked Examples

8. Design Tradeoffs

Lecture Videos (37:03)

Assignment 4 (due Nov 7)

Lab 4: 32-bit ALU (2 Questions)
Lab due Nov 8, 2016, 7:59 AM GMT+8

Exit Survey

Course Exit Survey

Exam (due Nov 14)