

# CS 2810: Computer Organization and Architecture

Spring 2018	Topics	Assignments
Jan 8-12	binary numbers	
Jan 15-19 ( <i>MLK Day</i> )		Binary quiz
Jan 22-26		
Jan 29-Feb 2		
Feb 5-9		
Feb 12-16		
Feb 19-23 ( <i>Presidents' Day</i> )		
Feb 26-Mar 2	assembly language	Mandelbrot steps 1, 2
Mar 5-9		Midterm exam
Mar 12-16 ( <i>Spring break</i> )		
Mar 19-23		steps 3, 4, 5
Mar 26-30		steps 6, 7
Apr 2-6	caching	step 8
Apr 9-13	virtual memory	steps 9, 10
Apr 16-20	malloc, free, gc	step 11, 12
Apr 23-27 ( <i>Wednesday last day</i> )	Atari 2600	step 13

Changes to the schedule will be announced in class.

## Resources

- [Syllabus](#)
- [Examples from class](#)
- [Deep Mandelbrot zoom video](#)
- [Introduction to Computer Organization: ARM Assembly Language Using the Raspberry Pi](#)

## git and ssh

- [How to set up ssh \(public key, firewall\)](#)
- [How to set up ssh forwarding using PuTTY \(for Windows\)](#)
- [git book](#)
- [git cheat sheet](#)
- [git for computer scientists](#)
- [longer cheat sheet](#)
- [How to set up git for a centralized repository](#)
- [25 tips for intermediate git users](#)

## Raspberry Pi

- [Recommended Raspberry Pi 3 kit \(red/white case\)](#)
- [Recommended Raspberry Pi 3 kit \(black case\)](#)
- [Recommended 32GB micro SD card](#)
- [MicroSD card benchmarks](#) (use this to help pick a fast 32GB card)

## Assembly language resources

- [ARM assembly notes \[html\] \[pdf\]](#)
- [Makefile](#)
- [Assembler directives cheat sheet](#)
- [ARM quick reference](#)
- [Official instruction set quick reference](#)
- [ARM instruction set slides](#)

## Daily assignments

It is important that you come to class prepared. I will post reading and watching assignments here.

- Jan 11: Read [Chapter 2.1 through 2.8](#) and watch the [Binary and hexadecimal number systems videos](#) on Khan Academy.
- Jan 16: Read [Chapter 2.9 through 2.16](#) and [Chapter 3.1 through 3.3](#).
- Jan 18: Read [Chapter 3.4 through 3.7](#). and watch this [14m video about two's complement numbers](#).