Winter 2017 Lecture Schedule*

The dates and topics in this document are tentative and subject change.

ZYBOOKS READING

First week participation activities and challenges are due Friday, 1/13/17 at 11:59pm. Participation activities and challenges from the zyBooks textbook are due at 11:59pm on the date listed, with the exception of the first week. For example, Ch. 6.1-6.4 is due by Wednesday 1/18/17 at 11:39pm, and Ch. 3.1-3.6 is due by Friday 1/20/17 11:59pm.

PROGRAMS

Your programs are to be turned in on Gradescope. All programs are due at 11:59pm of the date listed below.

Program	Assigned	Due	Late	Program	Assigned	Due	Late
1	1/9	1/17	1/18	2	1/17	1/22	1/23
3	1/23	1/29	1/30	4	1/30	2/5	2/6
5	2/6	2/12	2/13	6	2/13	2/21	2/22
7	2/24	3/5	3/6	8	3/6	3/15	3/16

LECTURES

Week 1 Discussion: Linux tutorial, vim tutorial

M 1/9 Overview of C, Linux, command-line environments **Reading:** zyBook Ch. 1.1-1.12

W 1/11 Variables, assignment, types **Reading:** zyBook Ch. 2.1-2.8

F 1/13 `printf`, `scanf`, overflow, random numbers **Reading:** zyBook Ch. 2.9-2.18

Week 2 Discussion: Static Debugging with `printf` & style

M 1/16 **Holiday: Martin Luther King Jr. Day**

W 1/18 Functions, parameters, arguments, return values **Reading:** zyBook Ch. 6.1-6.4

F 1/20 Branching: `if-else`, `switch`, C "boolean" variables **Reading:** zyBook Ch. 3.1-3.6

*Last updated January 12, 2017

Week 3 Discussion: Dynamic debugging: GDB and DDD

M 1/23 String & `char` comparisons **Reading:** zyBook Ch. 3.7-3.9

W 1/25 Floating point comparisons, short-circuit (lazy) evaluation **Reading:** zyBook Ch. 3.10-3.14

F 1/27 Midterm 1

Week 4 Discussion: Iterative programming

M 1/30 Loops: `while`, `for`, nested loops **Reading:** zyBook Ch. 4.1-4.6

W 2/1 Iterative (incremental) programming, `break`, `continue`, `enum` **Reading:** zyBook Ch. 4.7-4.11, Ch. 11.1

F 2/3 Functions & the stack frame, `assert` **Reading:** zyBook Ch. 6.5-6.8

Week 5 Discussion: Segmentation faults, valgrind

M 2/6 Arrays, iterating through arrays, segmentation faults **Reading:** zyBook Ch. 5.1-5.4

W 2/8 Reversing an array, 2D arrays**Reading:** zyBook Ch. 5.5-5.9

F 2/10 Strings (`char` arrays), string functions**Reading:** zyBook Ch. 5.10-5.15

Week 6 Discussion: Pointers & memory

M 2/13 Pointers, `malloc`, `free` **Reading:** zyBook Ch. 8.1-8.3

W 2/15 Pointers & strings, `realloc` **Reading:** zyBook Ch. 8.5-8.7

F 2/17 Linked lists, heap & stack, memory leaks **Reading:** zyBook Ch. 8.9-8.12

Week 7 Discussion: Abstract data types

M 2/20 **Holiday: President's Day**

W 2/22 Vector ADT **Reading:** zyBook Ch. 8.8, 8.13

F 2/24 Midterm 2

Week 8 Discussion: Breaking large one-file programs into smaller files

M 2/27 Pointers as function parameters: call-by-reference vs. call-by-value **Reading:** zyBook Ch. 6.9-6.12

W 3/1 Function scope, multiple file programs **Reading:** zyBook Ch. 6.13-6.17

F 3/3 Input/Output (I/O), `stdin`, `stdout` **Reading:** zyBook Ch. 9.1-9.4

Week 9 Discussion: Using make

M 3/6 File I/O, command-line arguments **Reading:** zyBook Ch. 9.5, Ch. 11.3, 11.7, 11.9

W 3/8 Grouping data with `struct` **Reading:** zyBook Ch. 7.1-7.5

F 3/10 `#define`, Makefiles **Reading:** zyBook Ch. 11.4-11.6

Week 10 Discussion: debugging recursive functions

M 3/13 Recursion **Reading:** zyBook Ch. 10.1-10.3

W 3/15 Euclid's Algorithm **Reading:** zyBook Ch. 10.4-10.6

F 3/17 Brute force with recursion, stack overflow**Reading:** zyBook Ch. 10.7-10.9