Illini Snapshot

Prof Bill - Apr 2018

Illinois CS is **strong!** So, I often look to Illini CS courses for help in designing my own syllabus. My logic is simple: The Illini are strong, so maybe we can be too. Huzzah!

The University of Illinois is running their data structures course right now. It's called CS 225. Here's a snapshot of their lecture schedule.

courses.engr.illinois.edu/cs225/sp2018

Schedule

Monday	Wednesday	Friday
January 15 **MLK Day**	January 17 **Intro** slides | handout | TA Notes	January 19 **Classes** slides | handout | code | TA Notes
January 22 **Memory** slides | handout | pointers.pdf | code | TA Notes	January 24 **Heap + Parameters** slides | handout | Binky Pointer Fun | code | TA Notes	January 26 **Parameters** slides | handout | arrays.pdf | parameters.pdf | code | TA Notes
January 29 **Class Lifecycle** slides | handout | TA Notes	January 31 **Inheritance** slides | handout | TA Notes	February 2 **Templates** slides | handout | TA Notes
February 5 **List ADT** slides | handout | inherit.pdf | TA Notes	February 7 **List Impl** slides | handout | TA Notes	February 9 **Stack and Queues** slides | handout | TA Notes
February 12 **Iterators** slides | handout | TA Notes	February 14 **Trees - Intro** slides | handout | TA Notes	February 16 **Trees - Proofs** slides | handout | TA Notes | lecture code for BinaryTree
February 19 **Tree Traversal** slides | handout | TA Notes | lecture code for BinaryTree	February 21 **BST** slides | handout | TA Notes | lecture code for BST	February 23 **BST Remove** slides | handout | TA Notes | lecture code for BST
February 26 **BST Analysis** slides | handout | TA Notes | lecture code for BST	February 28 **AVL** slides | handout | TA Notes	March 2 **AVL Analysis** slides | handout | TA Notes
March 5 **AVL Applications** slides | handout | TA Notes	March 7 **kd-Tree** slides | handout | TA Notes	March 9 **EOH - No lecture**
March 12 **BTree Intro** slides | handout | TA Notes	March 14 **BTree Analysis** slides | handout | TA Notes	March 16 **Hashing - Hash Function** slides | handout | TA Notes

March 19 **Spring Break**	March 21 **Spring Break**	March 23 **Spring Break**
March 26 **Hashing - Collisions** slides I handout I TA Notes	March 28 **Hashing - Running Time** slides I handout I TA Notes	March 30 **Heaps** slides I handout I TA Notes
April 2 **Priority Queues** slides I handout	April 4 **Disjoint Sets** slides I handout	April 6 **Disjoint Sets Implementation** slides I handout
April 9 **Graphs - Intro** slides I handout I TA Notes	April 11 **Graphs - Implementations** slides I handout I TA Notes	April 13 **Graphs - Implementations 2** slides I handout I TA Notes
April 16 **Graphs - Traversals (BFS)** slides I handout	April 18 **Minimum Spanning Tree (MST)** slides I handout	April 20 **MST - Kruskal and Prim** slides I handout
April 23 **MST Finale + Dijkstra** slides I handout	April 25 **Single Source Shortest Path (SSSP)**	April 27 **SSSP Dijkstra**
April 30 **TBA**	May 2 **TBA**	May 4 **Finals**

So, my first take: there's a lot of overlap. I like that. The Illini use C++, so some of their lectures are a somewhat specific to that.

The main differences I see are:

- ➢ Iterators, AVL - they go deeper than we do
- ➢ Templates - we have generics in Java; C++ templates are a little
- ➢ Trees proofs - meh
- ➢ k-d tree, disjoint sets - I'll introduce these data structures if we have time

Conclusion: We are looking good.
thanks… yow, bill

PS - Full disclosure: Yes, I'm an Illinois CS alum.
Marching Illini, too. Hail to the orange, hail to the blue…
https://youtu.be/llnEbR-by_Q?t=5m15s