CS163: Course Plan

Winter 2021

(The following dates are subject to change!)

Date	Topic #	Required Videos to Watch(*)	Reading Assigned In Carrano	Linux Manual	Lab Performed
Week #1	• Introduction, Syllabus • Topic #1 – Data Abstraction	Topic #1 Part I, II	Carrano: 1 and 2	Linux #2.1	**CS163 Lab #1** LLL, Recursion
Week #2	• Topic #2 – Building an ADT • Topic #3 – An Example of an ADT	Topic #2 Part I, II Topic #3 Part I, II	Carrano: 3, 4, and 5	Linux #2.2	**CS163 Lab #2** ADTs
Week #3	• **No Class Monday Jan 18th (Holiday)** • Topic #4 – Stack and Queues • Practice with Recursion, Review for Midterm #1	Topic #4 Part I, II, III	Carrano: 6 and 7	Linux #2.3	**CS163 Lab #3** Stacks and Queues
Week #4	• Topic #5 – Doubly LL and Circular LL • **Midterm #1 on January 27th**	Topic #5 Video		Linux #2.4	**CS163 Lab #4** DLL and CLL
Week #5	• Topic #7 – Efficiency • Topic #6 – Hash Tables • **Midterm Demos**	Topic #7 Video Topic #6 Video	Carrano: 10 Carrano: 18.4	Linux #2.5	**CS163 Lab #5** Parallel Prog.
Week #6	• Topic #8 – Trees • Topic #9 – Insert, Removal	Topic #8 Part I, II Topic #9 Part I, II, III	Carrano: 15 Carrano: 16	Linux #2.6	**CS163 Lab #6** Hash Tables
Week #7	• Topic #9 – Tree Efficiency • Review for Midterm #2	Topic #9 IV, V	Chapter 19 (balanced)	Linux #2.7	**CS163 Lab #7** BSTs
Week #8	• Topic #11 – Graphs • **Midterm #2 on February 24th**	Topic #11 on graphs	Chapter 20 (graphs)	Linux #2.8	**CS163 Lab #8** Graphs
Week #9	• Topic #10 – Advanced Trees • Topic #11 – Heaps	Topic #10 Part I, II Topic #10-11 heaps and b-trees	Chapter 21.3, 21.5 Chapter 17 (heaps)	Linux #2.9	**CS163 Lab #9** Balanced Trees
Week #10	• Topic #12 – Iterative sorts • Topic #13 – Recursive sorts • **Final Prof Demos Begin March 12th**	Topic #12 Iterative Topic #13 Recursive	Chapter 11	Linux #2 Review	**CS163 Lab #10** Review BST and Balanced Trees

(*) Videos **must** be watched **prior** to the live streaming sessions