Oregon State University
Ecampus

Course Name: Data Structures
Course Number: CS 261 (Section 400 & 401)
Credits: 4
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Course Content

Week	Course Activities
1	○ Reading: Chapters 1-4 ○ Reading: Complexity Analysis (Big O) ○ Reading: C Review Crash Course _A_MUST_READ.pdf ○ Lecture: C Programming Basics Review ○ Lecture: C Pointers Review ○ Lecture: C - Compilation Process ○ Lecture: Static Dynamic Structure Example ○ Worksheets 9 and 10 (not collected or graded) ○ Joining a Worksheet Group (should be done individually) ○ Worksheet: First Meeting Minutes Submission (should be done and submitted as a group) ○ Syllabus Quiz ○ Assignment 0: Introduction and Learning to Use an IDE and Unix Host ○ Assignment 1: C Programming Practice
2	○ Reading: Chapters 5-6, 8 ○ Lecture: Abstract Data Types ○ Lecture: Dynamic Arrays ○ Lecture: Dynamic Arrays - Implementation ○ Worksheets 0, 14, 15, 16, and 21 ○ Assignment 2: Amortized Analysis and Dynamic Array Application
3	○ Reading: Chapter 7 ○ Lecture: DynamicArrayDequeIntro ○ Lecture: DynamicArrayDequeImplementation ○ Lecture: LinkedListIntro ○ Lecture: LinkedListQueue ○ Lecture: LinkedListDequeue ○ Worksheets 17, 18, 19, and 20 ○ Assignment 3: Linked List Application
4	○ Reading: Chapters 8-9 ○ Lecture: Linked_list_Iterator_Demo ○ Lecture: Iterator ADT ○ Lecture: Ordered Arrays and Binary Search ○ Worksheets 22, 23, 24, and 26
5	○ Reading: Chapter 10 ○ Lecture: Trees Intro ○ Lecture: BST 1 ○ Lecture: BST 2 ○ Lecture: BST 3

Week	Course Activities
	○ Worksheets 28 and 29 ○ Assignment 4: BST Application
6	○ Reading: Chapter 10-2 ○ Reading: Read but do not yet complete Worksheet 31 ○ Lecture: AVL 1 ○ Lecture: AVL 2 ○ Lecture: AVL Implementation - code walkthrough ○ Worksheets AVL Practice and 31 ○ **MIDTERM EXAM (Available from November 6 to 10, covers materials from Week 1 to Week 4)**
7	○ Reading: Chapter 11 ○ Lecture: Heaps I ○ Lecture: Heaps II ○ Lecture: Heap Sort ○ Worksheets Heaps Practice, 33, and 34
8	○ Reading: Chapter 12 ○ Lecture: HashTables Intro ○ Lecture: Maps ○ Lecture: HashTables_OpenAddressing ○ Lecture: HashTables Chaining ○ Lecture: Hash-Like Sorting ○ Worksheets 36, 37, and 38 ○ Assignment 5 (Portfolio Assignment): Hash Map Application
9	○ Reading: Chapter 13 ○ Lecture: Graphs Intro ○ Lecture: Graph Algorithms II ○ Lecture: Graph Algorithms II DFS/BFS ○ Lecture: Graph Algorithms III Dijkstra ○ Worksheets 40, 41, and 42
10	○ Reading: Chapters 10, 12 ○ Lecture: Tree Traversals ○ Lecture: BST Iterator ○ Worksheets 30 and 32 ○ **FINAL EXAM (Available from December 7 to 11, covers materials from Week 1, Week 5 to Week 9, and pointers)**