



Course Name: Data Structures

Course Number: CS 261 (Section 400)

Credits: 4

Instructor names: Laurel Hopkins

Instructor emails: hopkilau@oregonstate.edu

Course Content

Week	Course Activities
1	<ul style="list-style-type: none">○ 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	<ul style="list-style-type: none">○ 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	<ul style="list-style-type: none">○ Reading: Chapter 7○ Lecture: DynamicArrayDequeIntro○ Lecture: DynamicArrayDequeImplementation○ Lecture: LinkedListIntro○ Lecture: LinkedListQueue○ Lecture: LinkedListDeque○ Worksheets 17, 18, 19, and 20○ Assignment 3: Linked List Application
4	<ul style="list-style-type: none">○ 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	<ul style="list-style-type: none">○ Reading: Chapter 10○ Lecture: Trees Intro○ Lecture: BST 1○ Lecture: BST 2○ Lecture: BST 3

Week	Course Activities
	<ul style="list-style-type: none"> ○ Worksheets 28 and 29 ○ Assignment 4: BST Application
6	<ul style="list-style-type: none"> ○ 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 February 12 to 16, covers materials from Week 1 to Week 4)
7	<ul style="list-style-type: none"> ○ Reading: Chapter 11 ○ Lecture: Heaps I ○ Lecture: Heaps II ○ Lecture: Heap Sort ○ Worksheets Heaps Practice, 33, and 34
8	<ul style="list-style-type: none"> ○ 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: Hash Map Application
9	<ul style="list-style-type: none"> ○ 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	<ul style="list-style-type: none"> ○ Reading: Chapters 10, 12 ○ Lecture: Tree Traversals ○ Lecture: BST Iterator ○ Worksheets 30 and 32 ○ FINAL EXAM (Available from March 14 to 18, covers materials from Week 1, Week 5 to Week 9, and pointers)