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	○ Module 1 - Overview ○ Exploration: Intro to Data Structures ○ Exploration: Some Opening Thoughts ○ Review - Module 1 ○ Syllabus Quiz ○ Assignment 1: Environment setup
2	○ Module 2 - Overview ○ Exploration: Big O Introduction ○ Exploration: Big O Examples ○ Review - Module 2 ○ Assignment 2:Amortized Analysis and Python List Reimplementation Application
3	○ Module 3 - Overview ○ Exploration: An Overview of ADTs ○ Exploration: Python's List ○ Review - Module 3
4	○ Module 4 - Overview ○ Exploration: Introduction to Linked Lists ○ Exploration: Stacks, Queues and Deques ○ Review - Module 4 ○ Assignment 3: Linked List Application
5	○ Module 5 - Overview ○ Exploration: Encapsulation and Iterators ○ Exploration: Iterator Example ○ Exploration: Binary Search ○ Review - Module 6
6	○ Module 6 - Overview ○ Exploration: Trees ○ Exploration: Binary Trees ○ Exploration: BST Operations ○ Review - Module 6 ○ Assignment 4: Binary Search Trees
7	○ Module 7 - Overview ○ Exploration: AVL Trees and Balancing ○ Exploration: AVL Tree Rotations ○ Exploration: Rotation Implementation ○ Review - Module 7
8	○ Module 8 - Overview

Week	Course Activities
	○ Exploration: Priority Queues and Heaps ○ Exploration: Heap Implementation ○ Review - Module 8
9	○ Module 9 - Overview ○ Exploration: Introduction to Maps and Hash Tables ○ Exploration: Hash Table Collisions ○ Review - Module 9 ○ Assignment 5: Implementation of hash map and spell checker (Portfolio Assignment)
10	○ Module 10 - Overview ○ Exploration: Graphs ○ Exploration: Working with Graphs ○ Review - Module 10