



Oregon State University

Ecampus

Course Name: Data Structures

Course Number: CS 261 (Online)

Credits: 4

Instructor names: Tim Alcon & Samina Ehsan

Instructor email: alcon@oregonstate.edu & ehsans@oregonstate.edu

Course Schedule:

Week	Course Activities
1	<ul style="list-style-type: none">○ Module 1 - Overview○ Exploration: Intro to Data Structures○ Exploration: Some Opening Thoughts○ Syllabus Quiz (Due: March 12, 2021)○ Assignment 0: Introduction Environment Setup (Due: January 13, 2021)○ Review - Module 1
2	<ul style="list-style-type: none">○ Module 2 - Overview○ Exploration: Big O Introduction○ Exploration: Big O Examples○ Assignment 1: Python Programming Practice (Due: January 27, 2021)○ Review - Module 2
3	<ul style="list-style-type: none">○ Module 3 - Overview○ Exploration: An Overview of ADTs○ Exploration: Python's List○ Assignment 2: Implementation of Dynamic Array and ADTs using Dynamic Array and Amortized Analysis (Due: February 03, 2021)○ Review - Module 3
4	<ul style="list-style-type: none">○ Module 4 - Overview○ Exploration: Introduction to Linked Lists○ Exploration: Stacks, Queues and Deques○ Assignment 3: Implementation of Linked Lists and Various ADTs Using Linked Lists (Due: February 17, 2021)○ Review - Module 4
5	<ul style="list-style-type: none">○ Module 5 - Overview○ Exploration: Encapsulation and Iterators○ Exploration: Iterator Example○ Exploration: Binary Search○ Review - Module 5
6	<ul style="list-style-type: none">○ Module 6 - Overview○ Exploration: Trees○ Exploration: Binary Trees○ Exploration: BST Operations○ Assignment 4: Binary Search Tree Implementation (Due: February 24, 2021)○ Quiz 1 (Available from Feb 10 to 14, 2021 and covers materials from Week 1 to Week 5)○ Review - Module 6

Week	Course Activities
7	<ul style="list-style-type: none"> ○ Module 7 - Overview ○ Exploration: AVL Trees and Balancing ○ Exploration: AVL Tree Rotations ○ Exploration: Rotation Implementation ○ Review - Module 7
8	<ul style="list-style-type: none"> ○ Module 8 - Overview ○ Exploration: Priority Queues and Heaps ○ Exploration: Heap Implementation ○ Review - Module 8
9	<ul style="list-style-type: none"> ○ Module 9 - Overview ○ Exploration: Introduction to Maps and Hash Tables ○ Exploration: Hash Table Collisions ○ Assignment 5: AVL, Hash Map and Heap Implementation (Portfolio Assignment) (Due: March 10, 2021) ○ Review - Module 9
10 and final week	<ul style="list-style-type: none"> ○ Module 10 - Overview ○ Exploration: Graphs ○ Exploration: Working with Graphs ○ Assignment 6: Graph and Graph Algorithms Implementation (Due: March 17, 2021) ○ Quiz 2 (Available from March 13 to 17, 2021 and covers materials from Week 6 to Week 10) ○ Review - Module 10

This course is offered through Oregon State University Extended Campus. For more information visit:
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