



Oregon State University

Ecampus

Course Name: Data Structures

Course Number: CS 261 (Section 401)

Credits: 4

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Instructor email: ehsans@oregonstate.edu

Course Content

Week	Course Activities
1	<ul style="list-style-type: none">○ Module 1 - Overview○ Syllabus Quiz○ Exploration: Intro to Data Structures○ Exploration: Some Opening Thoughts○ Exploration: Big O Complexity○ Exploration: Big O Examples○ Assignment 1: Environment setup and Python Practice (Due by: July 07, 2020)○ Review - Module 1
2	<ul style="list-style-type: none">○ Module 2 - Overview○ Exploration: An Overview of ADTs○ Exploration: Python's List○ Assignment 2: Amortized Analysis and Python List Reimplementation Application (Due by: July 14, 2020)○ Review - Module 2
3	<ul style="list-style-type: none">○ Module 3 - Overview○ Exploration: Introduction to Linked Lists○ Exploration: Stacks, Queues and Deques○ Assignment 3: Linked List Application (Due by: July 28, 2020)○ Exploration: Encapsulation and Iterators○ Exploration: Iterator Example○ Exploration: Binary Search○ Review - Module 3
4	<ul style="list-style-type: none">○ Module 4 - Overview○ Exploration: Trees○ Exploration: Binary Trees○ Exploration: Binary Search Trees○ Assignment 4: Binary Search Tree Implementation (Due by: August 04, 2020)○ Quiz (Available from July 16 to 20, covers materials from Week 1 to Week 3)○ Review - Module 4
5	<ul style="list-style-type: none">○ Module 5 - Overview○ Exploration: AVL Trees and Balancing○ Exploration: AVL Tree Rotations○ Exploration: Rotation Implementation

Week	Course Activities
	<ul style="list-style-type: none"> ○ Exploration: Priority Queues and Heaps ○ Exploration: Heap Implementation ○ Review - Module 5
6	<ul style="list-style-type: none"> ○ Module 6 - Overview ○ Exploration: Introduction to Maps and Hash Tables ○ Exploration: Hash Table Collisions ○ Assignment 5: Hash map implementation and application (Portfolio Assignment) (Due by: August 11, 2020) ○ Review - Module 6
7	<ul style="list-style-type: none"> ○ Module 7 - Overview ○ Exploration: Graphs ○ Exploration: Working with Graphs ○ Review - Module 7
	<ul style="list-style-type: none"> ○ Quiz 2 - (Available from August 9 to 13, covers materials from Week 4 to Week 7)

This course is offered through Oregon State University Extended Campus. For more information visit: <http://ecampus.oregonstate.edu>.