Conocim
Edutech

- **Basic Concept and Introduction to Data Structure**
    - Pointers and dynamic memory allocation
    - Algorithm-Definition and characteristics
    - Algorithm Analysis
    - Space Complexity
    - Time Complexity
    - Asymptotic Notation

- **Introduction to Data structure**
    - Types of Data structure
    - Abstract Data Types (ADT)

- **Introduction to Arrays and Structure**
    - Types of array and Representation of array
    - Polynomial
    - Polynomial Representation
    - Evaluation of Polynomial
    - Addition of Polynomial
    - Self Referential Structure

- **Searching and Sorting Techniques**
    - Linear Search
    - Binary Search(Recursive , Non-Recursive)
    - Bubble Sort
    - Insertion Sort
    - Selection Sort
    - Quick Sort
    - Heap Sort (No Implementation)
    - Merge Sort
    - Analysis of all Sorting Techniques

- **Linked List**
    - Introduction

- Static & Dynamic Representation
- Types of linked List
- Singly Linked list(All type of operation)
- Doubly Linked list (Create , Display)
- Circularly Singly Linked list (Create, Display)
- Circularly Doubly Linked list (Create, Display)

- **Stack and Queue**

  - Introduction stack
  - Static and Dynamic Representation
  - Primitive Operations on stack
  - Application of Stack
  - Evaluation of postfix and prefix expression
  - Conversion of expressions- Infix to prefix &
  - Infix to postfix

- **Queue**

  - Introduction queue
  - Static and Dynamic Representation
  - Primitive Operations on Queue
  - Application of Queue
  - Type of Queue
  - Circular Queue,De Queue,Priority Queue

- **Trees**

  - Introduction & Definitions
  - Terminology
  - Static and Dynamic Representation
  - Types of tree
  - Operations on Binary Tree & Binary Search Tree
  - Tree Traversal
  - Inorder, Preorder, Postorder (Recursive & Iterative)
  - AVL Tree

- **Graphs**

  - Representation
  - Adjacency Matrix
  - List, In degree , out degree of graph, Graph operation
  - DFS , BFS, Spanning Tree