

Semester Lecture Plan

Name of the college: Government College of Arts, Science and Commerce, Sanquelim Goa.							
Name of Faculty: Pooja Bhanudas Naik				Subject: Computer Science			
Paper code and Paper name: CSC-202:Data Structures and Algorithms				Program/Course: SYBSc		Division:	
Academic year: 2024 - 2025				Semester: IV		Total Lectures: 30	
Course Objectives: 1. To familiarize with basic data structures. 2. To develop the ability to choose the appropriate data structure for designing efficient algorithms							
Course Learning Outcome: On completion of the course, students will be able to: <ul style="list-style-type: none">1. Understand basic data structures, their implementation and some of their standard applications.2. Analyze space-time complexity of basic algorithms.3. Design and analyze basic algorithms using appropriate data structures.4. Code, debug and analyze programs using suitable data structures.							
Month	Lectures From: To:		No. of lectures allotted	Topic, Subtopic to be covered	Exercise/Assignment	ICT Tools	Reference books
December	09/12/2024	14/12/2024	2	Multi-dimensional arrays. Singly linked list.	Practice problems at home and during practicals.	Smart Board LCD Projector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning
December	16/12/2024	21/12/2024	2	Multi-dimensional arrays. Singly linked list.	Practice problems at home and during practicals.		
January	02/01/2025	04/01/2025	2	Doubly linked list, sorted list, multithreaded and circular linked list	Practice problems at home and during practicals.	Smart Board	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning

						LCD Projector	
January	06/01/2025	11/01/2025	2	Doubly linked list, sorted list, multithreaded and circular linked list	Practice problems at home and during practicals.	Smart Board LCD Projector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning
January	13/01/2025	18/01/2025	2	Stack using arrays and linked list and applications of stacks	Practice problems at home and during practicals.	Smart Board LCD Projector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning
January	20/01/2025	25/01/2025	2	Stack using arrays and linked list and applications of stacks	Practice problems at home and during practicals.	Smart Board LCD Projector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning
January	27/01/2025	01/02/2025	2	Queues using arrays and linked list. Sorting Algorithms	Practice problems at home and during practicals.	Smart Board LCD Projector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning
February	03/02/2025	08/02/2025	2	Queues using arrays and linked list. Sorting Algorithms	Practice problems at home and during practicals.	Smart Board LCD Projector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning
February	10/02/2025	15/02/2025	2	Queues using arrays and linked list. Sorting Algorithms	Practice problems at home and during practicals.	Smart Board LCD Projector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning
February	17/02/2025	22/02/2025	2	Searching algorithms, Recursion.	Practice problems at home and during practicals.	Smart Board LCD Projector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning

February	24/02/2025	01/03/2025	2	Searching algorithms, Recursion.	Practice problems at home and during practicals.	Smart Board LCD Projector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning
March	03/03/2025	08/03/2025	2	Trees with traversals.	Practice problems at home and during practicals.	Smart Board LCD Projector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning
March	10/03/2025	15/03/2025	2	Trees with traversals.	Practice problems at home and during practicals.	Smart Board LCD Projector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning
March	17/03/2025	22/03/2025	2	Heaps and graphs with traversals.	Practice problems at home and during practicals.	Smart Board LCD Projector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning
March	24/03/2025	29/03/2025	2	Heaps and graphs with traversals.	Practice problems at home and during practicals.	Smart Board LCD Projector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning
March	31/03/2025	05/04/2025	2	Revision	Practice problems at home and during practicals.	Smart Board LCD Projector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A pseudocode Approach with C. Cengage Learning

***Assessment Rubrics**

Component	Max Marks
ISA 1	7.5
ISA 2	7.5
Practical	25
Project	-
Semester End Examination	60