Semester Lecture Plan

Name of the college: Government College of Arts, Science and Commerce, Sanquelim Goa.								
Nama of Fa								
Name of Fa	culty: Pooja	Bhanudas N	alk		ibject: Computer Science			
Paper code	and Paper n	ame: CSC-20	2:Data Struct	sures and Algorithms Pr	ogram/Course: SYBSc	Division:		
Acadomic v	700r. 2021 - 2	0.25		c.	mostor: IV	Total Lactures: 45		
Academic y	ear. 2024 - 2	023		5		Total Lectures. 45		
Course Obj 1. To familiari 2. To develop	jectives: ize with basic of the ability to	data structure choose the ap	s. propriate dat	ta structure for designing efficient al	gorithms			
Course Lea: On co 1. Un 2. An 3. De 4. Co	 Course Learning Outcome: On completion of the course, students will be able to: 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	Lec From:	tures To:	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/Assignment	ICT Tools	Reference books	
December	09/12/2024	14/12/2024	3	Algorithm Basics – Algorithms and Data Structures, Pseudocode, Algorithm Features. Arrays – Basic Concepts	Practice problems at home and during practicals.	Smart Board LCD Proiector	Richard F. Gilberg, Behrouz A. Forouzan (2007). Data Structures: A	
December	16/12/2024	21/12/2024	3	One-dimensional Arrays	Practice problems at home and during practicals.		pseudocode Approach with C. Cengage Learning	
January	02/01/2025	04/01/2025	01	Two dimensional Arrays	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	

January 06/01/2025 11/01/2025 3 Two dimensional Arrays, Higher- dimensional Arrays, Higher- dinked List, Sorted Linked Linked Lis							
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February 10/02/2025 15/02/2025 3 Stacks - Linked-List Stacks, Array Stacks, Double Stacks Practice problems at home and during practicals. Smart Board Richard F. Gilberg, I Forouzan (2007). Data pseudocode Approa Cengage Lear February 10/02/2025 15/02/2025 3 Stacks, Double Stacks Practice problems at home and during practicals. Smart Board Richard F. Gilberg, I Forouzan (2007). Data Decemperation (2007). Data pseudocode Approa (2007). Data pseudocode Approa Kichard F. Gilberg, F Practice problems at home and during practicals. Smart Board Richard F. Gilberg, F Forouzan (2007). Data pseudocode Approa	February	03/02/2025 08/02/2025	2/2025 3	Linked List Algorithms, Linked List Selection-sort, Multithreaded Linked List, Linked List with loops.	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
Practice problems at home and during practicals. Smart Board Richard F. Gilberg, H Stack Algorithms-Applications of Stack Algorithms-Applications of Practice problems at home and during practicals. Smart Board Richard F. Gilberg, H	February	10/02/2025 15/02/2025	2/2025 3	Stacks – Linked-List Stacks, Array Stacks, Double 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
February 17/02/2025 22/02/2025 3 stacks. Queues – Linked-List Queue	February	17/02/2025 22/02/2025	2/2025 3	Stack Algorithms-Applications of stacks. Queues – Linked-List Queue	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	3	Array Queues, Specialized Queues.	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	3	Sorting Algorithms, 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	10/03/2025	15/03/2025	3	Trees – Tree Terminology, Binary Search Tree, Tree Representations, Tree Traversal	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	3	Threaded Trees, Specialized Tree Algorithms, Balanced Trees.	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	3	Graphs – Graph Terminology, Representation, Traversals, Finding Paths.	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	3	Heaps and Hashing	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
April	07/04/2025	11/04/2025	3	Revision	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	

*Assessment Rubrics

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