LESSON PLAN SESSION JUL – DEC 2024

SUBJECT: **DATA STUCTURE**   SEMESTER: **3RD**   BRANCH: - **COMPUTER SCIENCE & ENGINEERING**

UNIT NUMBER	NAME OF THE TOPIC	NO OF CLASS REQUIRED	REMARK
UNIT 01: **Introduction to data structure and Array in 'C'**	1.1 Introduction to data structure	01	

	1.2 Type of data Structure
	  1.2.1 Primitive & Non Primitive data Structure
	  1.2.2 Linear And Non Linear Data Structure
		02	

	1.3 Declaring and initializing One- Dimensional Array and array Operations Insertion, Searching	02	
	1.4 Multi-Dimensional Array and its Operations- Matrix operations	01	
	1.5 Drawbacks of Linear Arrays 1.6 Introduction character array and string.	01	
	Doubt Class	01	
Unit 02: **Stack and Queue**	2.1 Introduction to stack, 2.2 Implementation of stack 2.3 Operations on Stack, 2.3.1 Push, 2.3.2 Pop	01	
	2.4 Application of Stack, 2.4.1 Expression Evaluation	01	
	2.4.2 Infix to Postfix 2.4.3 Infix to Prefix	01	
	2.4.4 Recursion	01	
	2.5 Introduction to Queue, 2.6 Types of queue 2.6.1 Single Ended Queue	01	
	2.6.2 Circular Queue	01	
	2.6.3 Double Ended Queue.	01	
	2.7 Implementation of Queue, 2.8 Application of Queue	01	
	Doubt Class	01	
Unit 03: **Pointers, Structure and Union in 'C'**	3.1 Introduction and Features of Pointers 3.2 Declaration of Pointer	01	
	3.3 Operations on Pointers 3.4 Array of Pointers	01	
	3.5 Pointers to Pointers 3.6 Passing array to function	01	
	3.7 Introduction and Features of Structure & Union	01	
	3.8 Declaration of Structure & Union	01	
	3.9 Operations on Structure	01	
	Doubt Class	01	
Unit 04: **Linked List**	4.1 Introduction of Linked List, 4.1.1 node, 4.1.2 next address, 4.1.3 pointer, 4.1.4 null pointer	01	
	4.2 Types of Linked List, 4.2.1 Singly Linked List	01	
	4.2.2 Doubly Linked List, 4.2.3 Circular Linked List	01	
	4.3 Operations on Linked List: 4.3.1 Searching	01	
	4.3 Operations on Linked List: 4.3.2 insertion	01	
	4.3 Operations on Linked List: 4.3.3 Deletion	01	
	4.4 Applications of Linked List	01	
	Doubt Class	01	
Unit 05: **Graph and Tree**	5.1 Definition of graph, 5.2 Representation of graph	01	
	5.2.1 Adjacency Matrix	01	
	5.2.2 Incidence Matrix, 5.2.3 Adjacency List	01	
	5.3 Introduction to Tree, 5.4 Type of tree 5.4.1 Binary Tree	02	
	5.4.2 Binary Search Tree (BST)	01	

5.5 Operation on BST	5.5.1 Insertion		
5.5.2 Deletion	5.5.3 Traversing	01	
Doubt Class		01	
	Total Class Required	40	

Lecturer Name & Sign: - KAMLESH KUMAR SAHU
                  LECTURER, CSE, GPJ

LESSON PLAN SESSION JUL – DEC 2022

SUBJECT: **SOFTWARE ENGINEERING**   SEMESTER: **5TH**   BRANCH: - **COMPUTER SCIENCE & ENGINEERING**

UNIT NUMBER	NAME OF THE TOPIC	NO OF CLASS REQUIRED	REMARK
Unit 01: Fundamentals of Software Engineering	1.1 Software Engineering, 1.1.1 Software Characteristics	01	
	1.1.2 Changing Nature of software 1.1.3 Role of software engineering in real-time applications	01	
	1.1.4 Software engineering –a layered approach 1.1.5 Process Framework	01	
	1.2 Software life cycle, 1.2.1 Waterfall Model	01	
	1.2.2 Incremental process Model	01	
	1.2.3 Evolutionary process models, Spiral Model	01	
	1.2.3 Prototype Model	01	
Unit 02: **Software Engineering Practices & Requirement Analysis**	2.1 Essence of software engineering practice	01	
	2.2 Core principles	01	
	2.3 Requirement Engineering Tasks	02	
	2.3.1 Initiating requirements engineering process	01	
	2.4 Requirement Analysis	01	
	2.4.1 Analysis modeling approaches	01	
Unit 03: **Software design**	3.1 Design within the context of software engineering	01	
	3.2 Design process & design Quality	02	
	3.3 Design concepts	01	
	3.4 Mapping data flow into a software architecture	02	
	3.5 Golden rules for interface design	01	
Unit 04: **Software Testing**	4.1 Software testing fundamentals 4.2 A strategic approach to software testing	02	
	4.3 Test strategies for conventional software	01	
	4.4 Validation testing	01	
	4.5 System testing	01	
	4.6 Black box & white box testing	02	
	4.7 Control structure testing	01	

Unit 05:
 	
 Software Project Management
	5.1 The management Spectrum
	      5.2 the people, 5.3 The product
	      5.4 The process, 5.5 The project
		02	

	5.6 the W5HH Principle	01	
	5.7 metrics in the process & project domains	01	
	5.8 Software measurement 5.9 metrics for software quality	02	
	5.10 software scope, feasibility & resources	01	
	5.11 Software project estimation	01	
	5.12 decomposition techniques 5.13 Empirical estimation models	02	
	5.14 software reliability	01	
	Total Class Required	40	

Lecturer Name & Sign: - KAMLESH KUMAR SAHU   HOD CSE Sign: -
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