

Lesson plan		
Discipline Information Technology		Semester 3rd
Subject: Data Structure and Algorithms		Name of teaching Faculty Smt. Abhijita Routray, Lecturer in Computer Application
No of weeks-15		No of classes per week allotted-4
Week	Period	Topic
1st	1st	Introduction to Data Structures - Basic Terminology
	2nd	Classification of Data Structure
	3rd	Classification of Data Structure
2nd	1st	Operations on Data Structure
	2nd	Operations on Data Structure
	3rd	Asymptotic and worst-case analysis of algorithms
3rd	1st	Stacks-Introduction to Stacks, Array Representation of Stacks
	2nd	Operations on a Stack, Applications of Stacks- Infix-to-Postfix Transformation
	3rd	evaluating Postfix Expressions.
4th	1st	Queues: Introduction to Queues
	2nd	Array Representation of Queues
	3rd	Operations on a Queue, Types of Queues-DeQueue, Circular Queue,
5th	1st	Applications of Queues-Round Robin Algorithm.
	2nd	Linked Lists: Singly Linked List, Representation in Memory
	3rd	Operations on a Single Linked List
6th	1st	Circular Linked Lists
	2nd	Doubly Linked Lists,
	3rd	Linked List Representation and Operations of Stack,
7th	1st	Linked List Representation and Operations of Queue.
	2nd	Non-Linear Data Structures: Trees-Basic Terminologies
	3rd	Definition and Concepts of Binary Trees
8th	1st	Representations of a Binary Tree using Arrays and Linked Lists
	2nd	Operations on a Binary Tree-Insertion
	3rd	Deletion, Traversals,
9th	1st	Types of Binary Trees. GRAPHS: Graph Terminologies,
	2nd	Representation of Graphs- Set, Linked, Matrix, Graph Traversals
	3rd	Algorithm Paradigms: Greedy, Divide and Conquer
10th	1st	Algorithm Paradigms: Greedy, Divide and Conquer
	2nd	Branch and Bound
	3rd	Dynamic Programming and Backtracking
11th	1st	Dynamic Programming and Backtracking
	2nd	Sorting: The sorting problem
	3rd	Bubble sort
12th	1st	Selection sort
	2nd	Insertion sort
	3rd	Merge sort
13th	1st	Quicksort
	2nd	Searching: Symbol Tables, Binary Search Trees
	3rd	Balanced Search Trees. Hash Tables.
14th	1st	Graphs: Definition of a directed and undirected graph
	2nd	Paths, Cycles, spanning trees
	3rd	Directed Acyclic Graphs
15th	1st	Topological Sorting, Minimum Spanning Tree algorithms,
	2nd	Shortest Path algorithms: Dijkstra's algorithm
	3rd	Flow-based algorithms
CO1-Define the basic terminologies and classifications of data structures.		
CO2-Explain the representation and operations of linear data structures like stacks, queues, and linked lists.		
CO-3 -Implement algorithms for sorting and searching using appropriate data structures.		
CO- 4 -Analyze the time and space complexity of data structure operations and algorithm paradigms like dynamic programming and backtracking.		
CO-5- Design solutions using advanced data structures for real-world applications, such as shortest path problems or flow-based algorithms.		

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Discipline-Information		Lesson plan	
Technology		Semester-5th	
Subject-TH4(A)-		Name of teaching Faculty-Smt. Abhijita Routray,Lecturer in	
MOBILE COMPUTING		Computer Application	
No of weeks-15		No of classes per week allotted-4	
Week	Period	Topic	
1st	1st	Introduction to Wireless and Mobile Network: Historic background	
	2nd	Cellular Industry, advantages &disadvantages of Mobile systems	
	3rd	Cell concepts	
2nd	1st	Cell concepts	
	2nd	Wireless Network , revision	
	3rd	Basics of Wireless & Mobile System: Wire based and wireless systems	
3rd	1st	Infrared systems	
	2nd	cellular radio	
	3rd	Concepts of wireless LANS	
4th	1st	voice signals-its characteristics	
	2nd	Frequency spectrum	
	3rd	digital signal ,Broadband and base band signals , revision	
5th	1st	Cellular Systems: Cell layout, path-loss	
	2nd	propagation delay, fading, size and shape of cell	
	3rd	Concepts of frequency reuse, spectrum efficiency, Cell capacity to handle calls	
6th	1st	Call demand in a cell	
	2nd	channel requirement, cell splitting	
	3rd	cell sectoring concept and revision	
7th	1st	Channel Utilization Schemes: Concepts of Multiplexing	
	2nd	FDM, FDMA	
	3rd	TDD, TDM, TDMA, CDMA	
8th	1st	Concepts of spread spectrum and frequency hopping	
	2nd	Concepts of spread spectrum and frequency hopping	
	3rd	Introductory idea on AMPS; Compression operations	
9th	1st	voice compression and data compression	
	2nd	V.42	
	3rd	fax compression-introductory idea	
10th	1st	fax compression-introductory idea and revision	
	2nd	Global System for Mobile Communication (GSM): Historical background	
	3rd	SIM and GSM	
11th	1st	SIM and GSM	
	2nd	Overview of GSM operations	
	3rd	Registration	
12th	1st	Call Establishment	
	2nd	Roaming	
	3rd	GSM channel and operation	
13th	1st	Blue tooth and Wireless LANS: Need of compatibility , Bluetooth concepts	
	2nd	Comparison with IR system ,Architecture	
	3rd	potential applications	
14th	1st	IEEE802.11x Wireless LAN standard-basic configuration and architecture	
	2nd	c o n c e p t s o f w i r e l e s s h o m e networking and revision	
	3rd	Security and Privacy: Introduction, frequency hopping spread spectrum	
15th	1st	Encryption concepts , Public Key Encryption, Authentication Model	
	2nd	Smart Card, Biometric Authentication	
	3rd	Revision .	
Co-1 : Explain mobile and wireless network			
Co-2 : Demonstrate the working principles of infrared, cellular and wireless networks			
Co-3: Explain various type of multiplexing schemes, voice and data compression			
Co-4: Explain Global System for Mobile architecture			
Co-5: Explain connectivity technologies like Bluetooth, Wi-Fi.			

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Lesson plan

DISCIPLINE-MODERN OFFICE MANAGEMENT		Semester-3rd
Subject-E- COMMERCE COURSE CODE-TH 5		Name of teaching Faculty-Smt. Abhijita Routray,Lecturer in Computer Application
No of weeks-15		No of classes per week allotted-4
Week	Period	Topic
1	1st	Introduction: E-Commerce-meaning
	2nd	types of B to B market (independent, buyer oriented, supplier oriented, e- market place)
	3rd	types of B to B market (independent, buyer oriented, supplier oriented, e- market place)
2	1st	B2C [portals, e-tailor, content provider, transaction broker, real life examples of B2C]
	2nd	C2C,C2B
	3rd	forces behind e-commerce,
3	1st	e-Governance [meaning, types, significance, real life examples]
	2nd	E-Customer Relationship and Supply Chain Management :E-CRM and SCM E-CRM- definition
	3rd	features
4	1st	goals of E- CRM business framework
	2nd	phases of E- CRM
	3rd	types of E- CRM, Functional components of E- CRM
5	1st	strategies for ECRM solutions
	2nd	E- SCM :definition,
	3rd	features, types of supply chain
6	1st	Digital Payment : Digital Payment Methods of e-payments [Debit Card, Credit Card, Smart Cards, e Money, NEFT, RTGS]
	2nd	electronic or digital wallet
	3rd	digital signature (procedures, working and legal provisions)
7	1st	digital signature (procedures, working and legal provisions)
	2nd	payment gateways [Core Banking Solution or CBS, Mobile Payment, UPI, NCPI, International Payments]
	3rd	Online banking [meaning, concepts, importance, electronic fund transfer
8	1st	Online banking [meaning, concepts, importance, electronic fund transfer
	2nd	Online banking [meaning, concepts, importance, electronic fund transfer
	3rd	automated clearing house
9	1st	automated clearing house
	2nd	automated ledger posting
	3rd	automated ledger posting
10	1st	automated ledger posting
	2nd	risks involved in e-payments
	3rd	Enterprise Resource Planning: ERP & New Trends in E-Commerce ERP Definition
11	1st	features
	2nd	major characteristics
	3rd	levels of ERP
12	1st	benefits of ERP
	2nd	enterprise potential of ERP
	3rd	modules of ERP
	1st	phases of ERP implementation
	2nd	phases of ERP implementation

13	3rd	limitations of ERP
14	1st	Social Commerce : New Trends in E- Commerce Social Commerce -concept
	2nd	definition
	3rd	features
15	1st	Digital Marketing
	2nd	definition , objectives, methods, limitations; Advertisement in Social Media-objectives
	3rd	advantages and disadvantages

CO1: Understand and explain the fundamental concepts of E-Commerce

CO2: Explain the functioning of digital wallets ,digital signature and payment gateways

CO3: Understand and evaluate ERP system.

CO4: Discuss about new trends in Social Commerce.

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