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LESSON PLAN
2023-2024

DEPARTMENT OF COMPUTER APPLICATIONS

(PG –Odd & Even Semester)

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LESSON PLAN
2023-2024

Class : I MCA (I Semester)

Sub. Code : 23OPCA12

Title of the Paper : Linux and Shell Programming
Total Hours : 90 hrs

Month	Units	Description	Hrs.	Mode of Teaching	Course Teacher Signature
July 2023	I	• **Basic bash Shell Commands:** Interacting with the shell-Traversing the file system-Listing files and directories-Managing files and directories-Viewing file contents. • **Basic Script Building:** Using multiple commands-Creating a script file-Displaying messages-Using variables-Redirecting input and output - -Pipes-Performing math-Exiting the script ▪ **Using Structured Commands:** Working with the if-then statement-Nesting ifs-Understanding the test command-Testing compound conditions-Using double brackets and parentheses-Looking at case.	18	Chalk & Talk , Spot Test , Demo Coding	M.r— (M MURU GesWARI)
July 2023 & Aug 2023	II	• **More Structured Commands:** Looping with for statement-Iterating with the until statement-Using the while statement-Combining loops-Redirecting loop output. • **Handling User Input:** Passing parameters-Tracking parameters-Being shifty-Working with options-Standardizing options-Getting user input. • **Script Control:** Handling signals-Running scripts in the background-Forbidding hang-ups -Controlling a Job- ▪ Modifying script priority-Automating script execution.	18	Chalk & Talk, Spot Test , Demo Coding	M.r— (M.MURU GesWARI)

Aug 2023 & Sep 2023	III	• **Creating Functions:** Basic script functions-Returning a value-Using variables in functions-Array and variable functions-Function recursion-Creating a library-Using functions on the command line. • **Writing Scripts for Graphical Desktops:** Creating text menus-Building text window widgets-Adding X Window graphics. • **Introducing sed and gawk:** Learning about the sed Editor-Getting introduced to the gawk Editor-Exploring sed Editor basics.	18	Chalk & TalkDemo Coding	M·N (M·MURU GESWARI)
Sep 2023 & Oct 2023	IV	• **Regular Expressions:** Defining regular expressions-Looking at the basics-Extending our patterns- Creating expressions. • **Advanced sed:** Using multiline commands-Understanding the hold space- Negating a command-Changing the flow-Replacing via a pattern-Using sed in scripts-Creating sed utilities. ▪ **Advanced gawk:** Reexamining gawk-Using variables in gawk-Using structured commands- Formatting the printing-Working with functions.	18	Chalk & Talk, Assignment , Demo Coding	M·N (M·MURU GESWARI)
Oct 2023	V	• **Working with Alternative Shells:** Understanding the dash shell-Programming in the dash shell- Introducing the zsh shell-Writing scripts for zsh.Writing Simple Script Utilities: Automating backups-Managing user accounts-Watching disk space. • **Producing Scripts for Database, Web, and E-Mail:** Writing database shell scripts-Using the Internet from your scripts-Emailing reports from scripts. Using • **Python as a Bash Scripting Alternative:** Technical requirements-Python Language- Hello World the Python way-Pythonic arguments-Supplying arguments-Counting arguments- Significant whitespace-Reading user input-Using Python to write to files-String manipulation.	18	Students Seminar	M·N (M·MURU GESWARI)

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LESSON PLAN
2023-2024

Class : I MCA
Sub. Code : 23OPCA13
Title of the Paper : Python Programming
Total Hours : 90 hrs

Month	Units	Description	Hrs.	Mode of Teaching	Course Teacher Signature
July 2023	I	❖ Introduction: Fundamental ideas of Computer Science - Strings, Assignment, and Comments ❖ Numeric Data types and Character sets – Expressions – Loops and Selection Statements: ❖ Definite iteration: the for Loop - selection: if and if-else statements - Conditional iteration: the while Loop	18	Chalk & Talk, Chalk & Talk, PPT	Dr.J chinna Jelinny
Aug 2023	II	❖ Strings and Text Files: Accessing Characters and substrings in strings - Data Encryption-Strings. ❖ Number systems- String methods – Text - Lists and Dictionaries: Lists – Dictionaries – Design with Functions: ❖ A Quick review - Problem Solving with top-Down Design - Design with recursive Functions - Managing a Program's namespace - Higher-Order Functions	18	Chalk & Talk Chalk & Talk, PPT	Dr.J.chinna Jelinny
Sep 2023	III	❖ Design with Classes: Getting inside Objects and Classes – Data-Modeling Examples – Building a New Data Structure ❖ The Two – Dimensional Grid - Structuring Classes with Inheritance and Polymorphism – Graphical User Interfaces - The Behavior of terminal-Based programs ❖ GUI-Based programs - Coding Simple GUI-Based programs - Windows and Window Components - Command Buttons and responding to events.	18	Chalk & Talk, Chalk & Talk, PPT	Dr.J.chinna Jelinny

LESSON PLAN
2023-2024

Class : II MCA
Sub. Code : 22OPCA31
Title of the Paper : Web Technologies
Total Hours : 75 hrs

Month	Units	Description	Hrs.	Mode of Teaching	Course Teacher Signature
June 2023	I	❖ **Introduction:** The Internet - Basic Internet Protocols - The World Wide Web - HTTP Request Message - HTTP Response Message ❖ **Mark Up Languages :** Introduction to HTML - Basic XHTML Syntax and Semantics – Some Fundamental ❖ HTML Elements - Lists - Tables - Frames – Forms – Defining XHTML'S abstract Syntax: XML.	15 hrs	Chalk & Talk	Dr. J. Chinna *(signature)*
July 2023	II	❖ **Style Sheets: CSS** - Introduction to CSS – CSS Features -CSS Core Syntax - Style sheets and HTML - Style Rule Cascading and Inheritance ❖ **Client - side Programming** - Introduction to JavaScript - JavaScript in Perspective - Basic Syntax - Variables and ❖ Data Types - Statements - Operators - Literals -Functions - Objects - Arrays – Building –in Objects.	15 hrs	Chalk & Talk PPT	Dr. J. chinna *(signature)*
Aug 2023	III	❖ **Host Objects: Browsers and DOM** - Introduction to DOM – The Document tree. ❖ **Server side Programming – Java Servlets** – Servlet Architecture Overview - A 'Hello World'			Dr. J. Chinna *(signature)*

		Servlet	15 hrs	PPT	
		❖ Servlet Generating Dynamic Content – Servlet Life Cycle - Parameter Data – Sessions - Cookies – URL Rewriting.			
Sep 2023	IV	❖ **Representing Web Data: XML -** XML Documentations and Vocabularies – XML versions and the XML Declarations ❖ XML Namespaces - Event Oriented Parsing: SAX - Transforming XML Documents ❖ **Separating programming presentation: JSP** – Introduction to JSP - JSP and Servlets – Running JSP Applications - Basic JSP - JavaBeans Classes and JSP	15 hrs	Seminar, PPT	Dr.J.chinna *Jafirry*
Oct 2023	V	❖ **Enterprise JavaBeans: The Big Picture:** Introduction –Transaction Processors-Two-Tier , Client-Server Architecture - Three-Tier Architecture -Distributed Transaction Processing - EJB's Role. ❖ **EJB's Architecture:** Logical Architecture – Overview of EJB's Architecture ❖ A High-Level View of an EJB Conversation – RMI Clients - CORBA Clients - Building and Deploying EJBs.	15 hrs	Chalk & Talk PPT	Dr.J.Chinna *Jafirry*

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LESSON PLAN
2023-2024

Class   : II MCA
Sub. Code   : 22OPCA32
Title of the Paper : Python Programming
Total Hours   : 75 hrs

Month	Units	Description	Hrs.	Mode of Teaching	Course Teacher Signature
June 2023	I	• Introduction to Python: Python - Features of Python - Execution of a Python Program - Viewing the Byte Code - Flavors of Python • Python Virtual Machine(PVM). Datatypes in Python: Comments in Python - Docstrings - Datatypes in Python - Built-in datatypes - bool Datatype • Sequences in Python – Sets - Literals in Python - User-defined Datatypes - Constants in Python. Operators in Python: Operator - Arithmetic Operators • Assignment Operators - Unary Minus Operators - Relational Operators - Logical Operators - Boolean Operators - Membership Operators - Identity Operators - Operator Precedence and Associativity	15 hrs	Chalk & Talk	S.Vijaya CS.VIJAYA SANGARI)
July 2023	II	• Input and Output: Output statements - Input statements - Command Line Arguments. Control Statements: Control Statements - The if Statement - The if…else Statement – The if…elif…else Statement– • The while loop - the for loop - Infinite Loops -Nested Loops - The else Suite -	15 hrs	Chalk & Talk PPT	S.Vijaya CS.VIJAYA SANGARI

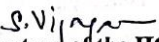|					
		The break Statement - The continue Statement - the pass Statement - The assert Statement • The return Statement. Arrays in Python: Array -Advantages of Arrays - Creating an Array - Types of Arrays– • Comparing Arrays - Aliasing the Arrays -Viewing and Copying Arrays - Dimensions of Arrays - Attributes of an Array.			
Aug 2023	III	• Strings and Characters: Creating Strings - Length of a String - Indexing in Strings - Slicing the Strings - Repeating the Strings - Concatenation of Strings - Checking Membership - Comparing Strings - Removing Spaces from a String • Finding Sub Strings -Counting Substrings in a String - Strings are Immutable - Replacing a String with another String - Splitting and joining Strings - Changing Case of a String - Checking starting and Ending of a String – • String Testing Methods - Formatting the Strings - Working with Characters - Sorting String - Searching in the Strings - Finding Number of Characters and Words - Inserting Sub String into a String. Functions: • Difference between a Function and a Method - defining a Function - Calling a Function – returning Results from a Function-Returning Multiple values from a Function	15 hrs	PPT	S.Vijaya (S. VIJAYA SANKARI)

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LESSON PLAN
2023-2024

Class : II MCA (III Semester)

Sub. Code : 22OPCA33

Title of the Paper : Data Communications and Networking

Total Hours : 60 hrs

Month	Units	Description	Hrs.	Mode of Teaching	Course Teacher Signature
June 2023	I	▪ **Introduction**: Data Communications – Networks ▪ Networks Types – Standards and Administration. ● **Network Models :** Protocol Layering - TCP/IP Protocol Suite - The OSI Model	12	Chalk & Talk, PPT	M·N (M·MURU GESWARI)
July 2023	II	▪ **Bandwidth Utilization: Multiplexing and Spectrum Spreading:** Multiplexing. ▪ **Transmission Media** : Guided Media - Unguided Media : Wireless . ● **Switching** : Circuit-Switched Networks - Packet Switching	12	Chalk & Talk, PPT	M·N (M·MURU GESWARI)
Aug 2023	III	▪ **Error Detection and Correction:** Introduction - Block Coding - Cyclic Codes - Checksum. ▪ **Wired LANs: Ethernet:** Ethernet Protocol. ● **Other Wireless Networks :** Cellular Telephony - Satellite Networks	12	Chalk & Talk	M·N (M·MURU GESWARI)
Sept 2023	IV	▪ **Network Layer: Introduction to Network Layer :**Network-Layer Services – Network Layer Performance ▪ IPV4 Addresses : – Address Space – Classful Addressing – Classless Addressing **Unicast Routing :** Routing Algorithms , Unicast Routing Protocols - Routing	12	PPT, Group Discussion	M·N (M·MURU GESWARI)

		Information Protocol(RIP) . **Multicast Routing :** Multicasting Basics.			
Oct 2023	V	■ **Transport Layer : Introduction to Transport Layer :** Introduction – Transport – Layer Protocols. ■ **Transport–Layer Protocols :** User Datagram Protocol - , Transmission Control Protocol : – TCP Services , TCP Features – Segment – A TCP Connection – Flow Control – Error Control . **Standard Client-Server Protocols :** Domain Name System(DNS)	12	Student's Seminar	M. Me (M. MURU GESWARI)

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LESSON PLAN
2023-2024

Class : II MCA

Sub. Code : 22OPCADSE3B

Title of the Paper : Internet of Things

Total Hours : 75 hrs

Month	Units	Description	Hrs.	Mode of Teaching	Course Teacher Signature
June 2023	I	■ Introduction to Internet of Things: Introduction – Physical Design of IoT ■ Logical Design of IoT - IoT Enabling Technologies – ■ IoT Levels & Deployment Templates.	15	Chalk & Talk, PPT	S.Vijay~ (S.VIJAYA SANKARI)
July 2023	II	■ Domain Specific IoTs: Introduction – Home Automation ■ Cities-Environment -Energy –Retail – Logistics – Agriculture – Industry - Healthy & Lifestyle. ■ IoT and M2M: Introduction - M2M - Difference between IoT and M2M - SDN and NFV for IoT.	15	Chalk & Talk, PPT	S.Vijay~ (S.VIJAYA SANKARI)
Aug 2023	III	● IoT System Management with NETCONF-YANG: Need fr IoT Systems Management - NETCONF-YANG ● IoT Systems Management with NETCONF - YANG. ● IoT Platforms Design Methodology: Introduction – IoT Design Methodology. ● Case Studies IoT Design: Introduction – Home Automation – Cities	15	Chalk & Talk, PPT	S.Vijay~ (S.VIJAYA SANKARI)
Sep 2023	IV	■ IoT Physical Devices & Endpoints: What is an IoT Device-Exemplary Device: Raspberry Pi – About the Board ■ Linux on Raspberry Pi – Raspberry Pi Interfaces – Other IoT Devices. ■ IoT Physical Servers & Cloud Offerings: Introduction to Cloud Storage Models & Communication APIs – WAMP –	15	Chalk & Talk, PPT	S.Vijay~ (S.VIJAYA SANKARI)

		▪ AutoBahn for IoT . Xively Cloud for IoT - Python Web Application Framework – Django – Amazon Web Services for IoT.			
Oct 2023	V	• Data Analytics for IoT: Introduction – Apache Hadoop • Using Hadoop MapReduce for Batch Data Analysis. • Tools for IoT: Introduction – Chef – puppet.	15	Seminar, PPT	S. Vijay~ (S. VIJAYA SANKARI)

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LESSON PLAN
2023-2024

Class : I MCA
Sub. Code : 23OPCA21
Title of the Paper : Data Structures and Algorithms
Total Hours : 90 hrs

Month	Units	Description	Hrs.	Mode of Teaching	Course Teacher Signature
Dec 2023	I	• Abstract Data Types: Introduction-Date Abstract Data Type-Bags-Iterators. • Arrays: Array Structure- Python List-Two Dimensional Arrays-Matrix Abstract Data Type • Sets, Maps: Sets-Maps- Multi- Dimensional Arrays.	18	Chalk & Talk	S.Vijayn CS.VIJAYA SANGARI
Jan 2024	II	• Algorithm Analysis: Experimental Studies-Seven Functions-Asymptotic Analysis • Recursion: Illustrative Examples-Analyzing Recursive Algorithms- • Linear Recursion- Binary Recursion-Multiple Recursion	18	PPT	S.Vijayn CS.VIJAYA SANGARI
Feb 2024	III	• Stacks, Queues, and Deques: Stacks- Queues-Double-Ended Queues. • Trees: General Trees-Binary Trees-Implementing Trees • Tree Traversal Algorithms	18	Chalk & Talk, PPT	S.Vijayn CS.VIJAYA SANGARI
Mar 2024	IV	• Priority Queues: Priority Queue Abstract Data Type- • Implementing a Priority Queue- Heaps-Sorting with a Priority Queue. Maps	18	Chalk & Talk, PPT	S.Vijayn CS.VIJAYA SANKAR

		- Hash Tables, and Skip Lists: Maps and Dictionaries- - Hash Tables- Sorted Maps-Skip Lists-Sets, Multisets, and Multimaps			
Marr 2024	V	- Search Trees: Binary Search Trees-Balanced Search Trees-AVL Trees -Splay Trees. Sorting and Selection: Merge sort-Quick sort--Selection. - Graph Algorithms: Graphs-Data Structures for Graphs- - Graph Traversals- Shortest Paths.	18	Seminar, PPT	S. Vijyn (S. VIJAYA SANKARI)

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LESSON PLAN
2023-2024

Class   : I MCA
Sub. Code   : 23OPCA22
Title of the Paper : Big Data Analytics
Total Hours   : 90 hrs

Month	Units	Description	Hrs.	Mode of Teaching	Course Teacher Signature
Dec 2023	I	❖ **Big Data and Analytics:** Classification of Digital Data: Structured Data- Semi Structured Data and Unstructured Data. **Introduction to** ❖ **Big Data:** Characteristics – Evolution – Definition - Challenges with Big Data –Basics of Big. ❖ **Environment Big Data Analytics:** Classification of Analytics – Challenges - Big Data Analytics important - Data Science - Data Scientist - Terminologies used in Big Data Environments - Top Analytics Tools	18	Chalk & Talk	Dr.J.Chinn… Jelin…
Jan 2024	II	❖ **Technology Landscape:** NoSQL, Hadoop .**Introduction to Hadoop :** RDBMS Versus Hadoop ❖ Distributed Computing Challenges – Hadoop Overview - Hadoop Distributed File System – ❖ Processing Data with Hadoop - Managing Resources and Applications with Hadoop YARN - Interacting with Hadoop Ecosystem	18	PPT	Dr.J.Chinn Jelin…
Feb 2024	III	❖ **Introduction to M0ongoDB : :** Concepts of MongoDB – ❖ Uses of MongoDB – Terms Used in RDBMS and MongoDB ❖ Data Types in MongoDB ,MongoDB Query	18	Chalk & Talk, PPT	Dr.J.Chinn Jelin…

		Language			
Feb 2024	IV	❖ **Introduction to Mapreduce Programming:** Mapper – Reducer – Combiner – Partitioner – Searching – Sorting – Compression .**Hive:** Introduction – Architecture - Data Types – ❖ File Formats - Hive Query Language Statements – Partitions – Bucketing – Views - Sub- Query – Joins – ❖ Aggregations - Group by and Having – RCFile .Implementation - Serialization and Deserialization - User Defined Function(UDF)	18	Chalk & Talk, PPT	Dr·J.Chinn Joliny
Marr 2024	V	❖ **Pig:** Introduction - Anatomy – Features – Philosophy - Use Case for Pig - Pig Latin Overview - Pig Primitive Data Types - Running Pig – ❖ Execution Modes of Pig - HDFS Commands - Relational Operators - Eval Function - Complex Data Types - Piggy Bank ❖ User-Defined Functions - Parameter Substitution – Diagnostic Operator - Word Count Example using Pig - Merits and Demerits of Pig- Pig at Yahoo! - Pig Versus Hive	18	Seminar, PPT	Dr·J.Chin Joliny

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LESSON PLAN
2022-2023

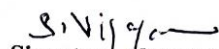|		
Class	:	I MCA (II Semester)
Sub. Code	:	23OPCASEC21
Title of the Paper	:	Block Chain Technologies
Total Hours	:	30 hrs

Month	Units	Description	Hrs.	Mode of Teaching	Course Teacher Signature
Dec 2022 & Jan 2023	I	• **Introducing Blockchain** : Beginning at the Beginning: What Blockchains Are-The Structure of Blockchains • Blockchain Applications- The Blockchain Life Cycle – Consensus : The Driving Force of Blockchains Blockchains in Use. • Blockchain-Where Blockchains Add Substance-Choosing a Solution- **Picking a Blockchain**-Where Blockchains Add Substance-Choosing a Solution	6	Chalk & Talk PPT	M.N (M. MURU GESWARI)
Jan 2023	II	• **Getting Your Hands on Blockchain**-Diving into the Bitcoin Blockchain- Using Smart Contracts with Bitcoin • Building a Private Blockchain with Docker and Ethereum. **Beholding the Bitcoin Blockchain:**Getting a Brief History of the Bitcoin Blockchain- Debunking some common Bitcoin misconceptions • Bitcoin: The New Wild West-Mining for Bitcoins	6	Chalk & Talk PPT	M.N (M. MURU GESWARI)

Feb 2023	III	• **Encountering the Ethereum Blockchain**-Exploring the Brief History of Ethereum -Ethereum: The OpenSource World Wide Computer -Hacking a Blockchain- Getting Up and Running on Ethereum • **Regarding the Ripple Blockchain**- Getting a Brief History of the Ripple Blockchain-Ripple: It's All About Trust, • Seeing How Ripple Differs from Other Blockchains -Unleashing the Full Power of Ripple.	6	Chalk & Talk	M·ne (M·MURU GESWARI)
Mar 2023	IV	• **Finding the Factom Blockchain**-A Matter of Trust -Building on Factom - • **Digging into DigiByte**-Getting Familiar with DigiByte: The Fast Blockchain Mining on DigiByte-Signing Documents on DigiByte's DiguSign-Earning DigiBytes While Gaming	6	PPT, Group Discussion	M·ne (M·MURU GESWARI)
Apr 2023	V	• **Powerful Blockchain Platforms : Getting Your Hands on Hyperledger** Getting to Know Hyperledger: Dreams of a Hyper Future- Focusing on Fabric-Investigating the Iroha Project-Diving into Sawtooth Lake. • **Applying Microsoft Azure**-Bletchley: The Modular Blockchain Fabric-Building in the Azure Ecosystem- • Getting Started with Chain on Azure- Deploying Blockchain Tools on Azure	6	Student's Seminar	M·ne (M·MURU GESWARI)

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LESSON PLAN
2023-2024

Class   : II MCA (IV Semester)
Sub. Code   : 22OPCA41
Title of the Paper : Big Data Analytics
Total Hours   : 60 hrs

Month	Units	Description	Hrs.	Mode of Teaching	Course Teacher Signature
Dec 2023	I	**Types of Digital Data:** Classification of Digital Data – Structured data – Semi-Structured Data – Unstructured Data **Introduction of Big Data** – Characteristics of Data – Evolution of Big Data – Definition of Big Data – Challenges with Big Data – What is Big Data? – **Big Data Analytics:** Where do we Begin? – What is Big Data Analytics? What Big Data Analytics Isn't? – Why this sudden Hype around Big data Analytics? – Classification of Analytics - Top challenges facing Big Data – Why is Big Data Analytics Important? – Data Science - Terminologies Used in Big Data Environment.	12	Chalk & Talk	M.Me (M.Murug eswari)
Jan 2024	II	**The Big Data Technology Landscape** - NoSQL – Hadoop - **.Introduction to Hadoop :** Introduction to Hadoop – Why Hadoop? -Why not RDBMS? RDBMS versus Hadoop – Distributed Computing Challenges - History of Hadoop - Hadoop Overview - Use case of Hadoop - Hadoop Distributors HDFS – Processing Data with Hadoop – Managing Resources and Applications with Hadoop YARN – Interacting with Hadoop Ecosystem.	12	PPT	M.Me (M.MURU GESWARI)

Feb 2024	III	**Introduction to MongoDB :** What is MongoDB? - Why MongoDB? – Terms Used in RDBMS and MongoDB Data Types in MongoDB – **Introduction to Cassandra:** Apache Cassandra – An Introduction Features of Cassandra – Collections – Alter Commands – Import and Export – Querying System Tables.	12	Chalk & Talk	M·N~ (M·MURU GESWARI)
Feb 2024 & Mar 2024	IV	**Introduction to MAPREDUCE Programming:** Introduction – Mapper – Reducer – Combiner Partitioner - Searching – Sorting – Compressing – **Introduction to Hive:** What is Hive? – Hive Architecture Hive Data Types – Hive File Format – Hive Query Language(HQL)	12	PPT, Group Discussion Chalk & Talk	M·N~ (M·MURU GESWARI)
Mar 2024	V	**Introduction to Pig:** What is Pig? - The Anatomy if Pig – Pig on Hadoop – Data Types in Pig Running Pig – Execution Modes of Pig – HDFS Commands - Eval Functions – Complex Data Types **Introduction to Machine Learning** – Introduction to Machine Learning - Machine Learning Algorithms.	12	Student's Seminar	M·N~ (M·MURU GESWARI)

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LESSON PLAN
2023-2024

Class   : II MCA
Sub. Code   : 22OPCA42
Title of the Paper : Mobile Computing
Total Hours   : 75 hrs

Month	Units	Description	Hrs.	Mode of Teaching	Course Teacher Signature
Dec 2023	I	• Applications - A Short History of Wireless Communication – • Some Open Research Topics - A Simplified Reference Model. • Wireless Transmission: Frequencies for radio transmission – Signals – Antennas– Multiplexing.	15	Chalk & Talk	S.Vijay (S.VIJAYA SANKARI)
Jan 2024	II	• Telecommunication Systems: GSM - Mobile services – System Architecture – Radio interface DECT • System architecture – Protocol architecture – TETRA. • Satellite Systems: History – Applications – Basics : GEO 173 – LEO 174 – MEO 175 – Routing – Localization - Handover.	15	PPT	S.Vijay (S.VIJAYA SANKARI)
Feb 2024	III	• Wireless LAN: IEEE 802.11 – System architecture- Protocol architecture - Physical layer • Medium access control layer – MAC management - HIPERLAN – Historical : HIPERLAN 1 - WATM – BRAN • HiperLAN2- Bluetooth - User scenarios – Architecture – Radio layer – Baseband layer – Link manager protocol.	15	Chalk & Talk, PPT	S.Vijay (S.VIJAYA SANKARI)

Mar 2024	IV	• Mobile Network Layer: Mobile ad-hoc networks – Routing – Destination sequence distance vector • Dynamic source routing – Alternative metrics – Overview ad-hoc routing protocols. Support for Mobility: Wireless application protocol (version 1.x) – Architecture • Wireless datagram protocol – Wireless transport layer security – Wireless transaction protocol – Wireless session protocol- Wireless application environment – • Wireless markup language – WMLScript – Wireless telephony application – Push architecture- Push/Pull services.	15	Chalk & Talk, PPT	S. Vijaya (S.VIJAYA SANKARI)
Marr 2024	V	• Getting Started with Android programming: Basics of Android – Obtaining the Required Tools • Creating Your First Android Application – Anatomy of an Android Application. Activities, Fragments, and Intents: Understanding Activities • Linking Activities Using Intents – Fragments – Calling Built- In Applications Using Intents – Displaying Notifications.	15	Seminar, PPT	S. Vijaya (S.VIJAYA SANKARI)

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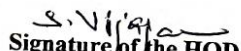
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LESSON PLAN
2023-2024

Class : II MCA
Sub. Code : 22OPCADSE4B
Title of the Paper : Cloud Computing
Total Hours : 75 hrs

Month	Units	Description	Hrs.	Mode of Teaching	Course Teacher Signature
Dec 2023	I	❖ **Era of Cloud Computing** : Getting to know the Cloud – Components of Cloud Computing – Cloud Types –Private , Public and Hybrid , Cloud Computing Service Delivery Models ❖ **Cloud Computing Services** – Infrastructure as a Service(IaaS) – Platform as a Service(PaaS) – Leveraging PaaS for Productivity – Software as a Service(SaaS) – Database as a Service(DBaaS) – Specialized Cloud Services. ❖ **Cloud Types and Models** – Private Cloud – Components of a Private Cloud – Community Cloud – Public Cloud – Public Cloud – Hybrid Clouds. Cloud Deployment Techniques –Cloud Network Topologies – Automation for Cloud Deployments – Self-Service Features in a Cloud Deployment – Federated Cloud Deployments – Cloud Performance – Impact of Memory on Cloud Performance – Improving Cloud Database Performance .	15	Chalk & Talk	Dr.J.Chinna
Jan 2024	II	❖ **Cloud Computing and Business Value** : Key Drivers for Cloud Computing – Cloud Computing and Outsourcing – Types of Scalability – Distribution over the Internet. ❖ **Demsystifying Cloud Computing** : Myths and Truths . **Recent Trends in Cloud Computing and Standards** : Recent Trends in – Conflict of	15	PPT	Dr.J.Chinna

			Interest for Public Cloud and IT Product Providers – Cloud Compliance – BYOD and Encryption Exposures – Cloud Standards – Cloud Ratings – Cloud Computing Trends that are Accelerating Adoption . ❖ **Data Security in the Cloud** : Challenges with Cloud Data - Challenges with Data Security – Data Confidentiality and Encryption – Data Availability – Data Integrity – Cloud Data Management Interface – Cloud Storage Gateways(CSGs) – Cloud Firewall – Virtual Firewall.		
Feb 2024	III	❖ **Application Architecture for Cloud** : Cloud Application Requirements – Architecture for Traditional Versus Cloud Applications – Fundamental Requirements for Cloud Application Architecture – Use of Client-Server Architecture for Cloud Applications – ❖ Addressing Cloud Application Performance and Scalability –Service Oriented Architecture (SOA) for Cloud Applications – Parallelization within Cloud Applications. ❖ **Cloud Programming** : Programming Support for Google Apps Engine – Programming Support for Amazon EC2. **Migrating Applications to the Cloud** : Cloud Migration Techniques – Phase during Migration of an Application to the cloud – Cloud emulators and its use for Application Testing and Migration.	15	Chalk & Talk, PPT	Dr.J.Chinn Sd/-
Mar 2024	IV	❖ **SLA with Cloud Service Providers** : The Concept of an SLA , SLA aspects and requirements – Service Availability – Cloud Outages – Credit Calculation for SLA Breaches – Sample SLA . ❖ **Introducing Virtualization** : Introducing Virtualization and its benefits –	15	Chalk & Talk, PPT	Dr.J.chinn Sd/-

			Implementation Levels of Virtualization – Virtualization at the OS Level – Virtualization Structure – Virtualization Mechanisms ❖ Open Source Virtualization Technology – Xen Virtualization Architecture - Binary Translation with full Virtualization – Paravirtualization with Compiler Support – Virtualization of CPU , Memory and I/O Devices , Hardware Support for Virtualization in Intex x86 Processor – Virtualization in Multicore Processors			
Marr 2024	V		❖ **Application Development for Cloud :** Developing On-Premise Versus Cloud Applications – Modifying Traditional Application for Deployment in the Cloud – ❖ Stages during the Development Process of Cloud Application – Managing a Cloud Application – Using Agile Software Development for Cloud Applications – Static Code Analysis for Cloud Applications – Developing Synchronous and Asynchronous Cloud Applications. ❖ **Application Security in the Cloud :** Cloud Application Software Development Lifecycle(SDLC) – Cloud Service Reports by Providers – Application Security in an IaaS Environment - Application Security in an PaaS Environment - Application Security in an SaaS Environment .**Mobile Cloud Computing :** Definition of Mobile Cloud Computing – Architecture of Mobile Cloud Computing – Benefits of Mobile Cloud Computing - Mobile Cloud Computing Challenges .	15	Seminar, PPT	Dr. J. Chim Jolin

S. Vijaya
Signature of the HOD

Signature of the Principal.