

MCA DEPARTMENT

Teaching Plan

A. Y. 2024-25


Name of Teacher: Mr.Vijay B. Pujari
Course Title: Data Structure Using C++

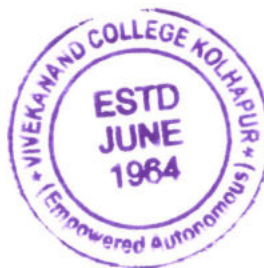
Class: MCA
Sem: I


Month: October			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
12	04	16	UNIT 1 INTRODUCTION TO DATA STRUCTURES	Introduction and meaning of data structure, Linked list-concept of singly, doubly and circular linked list, operations on linked list -Adding and removing nodes, Array implementation of lists, Limitation of the Array.
Month: November			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
12	04	16	Unit 2 STACK & QUEUES	STACKS -Definition and Example of stack, Implementation Of Stacks As An Array And Linked List, Operations on stacks, stack stored as a linked list arithmetic expression, converting an expression from Infix To Postfix. QUEUES - Definition And Examples Of Queues, Queues As An Abstract Data Type, Queues Stored As A Linked List, Circular Queue, Implementation Of Queues As An Array And Linked List, Operations On Queues, Priority Queue & Dequeue.structure,

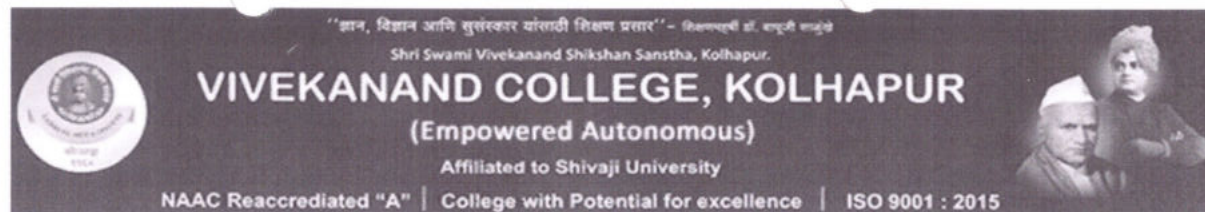


Month: December			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
12	04	16	Unit 3 TREES & GRAPHS	Trees, General tree, Binary tree, binary search tree, operations on binary search tree, AVL Trees, Single rotation, Double rotation, Red-Black Trees, B-Trees: Definition of B-trees, Basic operations on B-trees, deleting a key from a B-tree. Graphs: Representations of graph, Traversing Graphs, Breadth-first search, Depth-First Search, topological sort, Minimum Spanning trees, Single source shortest path, All pairs shortest path
Month: January			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
12	04	16	UNIT 4 RECURSION	Recursive Definition and Process, Factorial Function, Multiplication of Natural Numbers, Fibonacci Sequence, Properties of Recursive Definitions, Writing Recursive Programs (The Tower of Hanoi Problem, Converting Prefix to Postfix Using Recursion), Simulating Recursion (Return from A Function, Implementing Recursive Function, Simulation of Factorial)


Subject Teacher
 (Mr. V. B. Pujari)




Head
 (Mr. V. B. Pujari)



MCA DEPARTMENT

Teaching Plan

A. Y. 2024-25

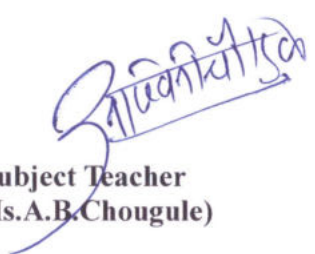
Name of Teacher: Dr.A.B.Chougule
Course Title: Database Management System

Class: MCA
Sem: I


Month: October			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
12	04	16	Unit 1 Database concept	Introduction, Data, Information Metadata, Terminology Of File, Association Between Fields, Entities And Their Attributes, Relationship Record And Files, Abstraction And Data Integration, Association Between Files (Record Types), Conventional File Processing System, Database System, Components Of Database Management System – (Classification Of DBMS Users, The Tree-Level Architecture, Mapping Between View, Data Independence.)
Month: November			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
12	04	16	Unit 2 Data Models	Introduction, Data Association-(Entities, Attributes And Associations, Relationship Among Entities, Representation Of Association And Relationship), Concept Of File Organization – Sequential Files, Index-Sequential Files, Direct Files. Relational Algebra: Basic Operations, Relational Algebra Queries, Relational Calculus: Tuple Calculus,

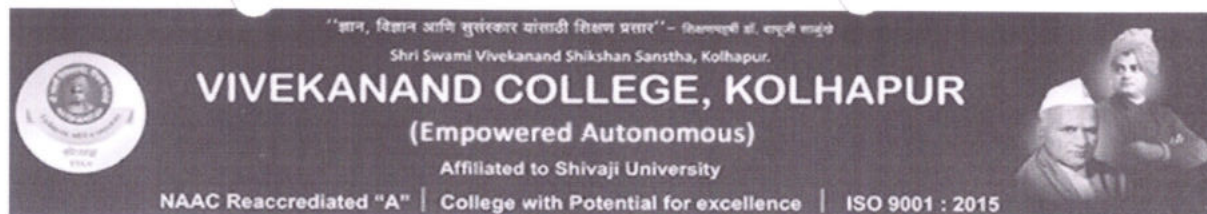


				Domain Calculus.-meaning, Process, Organization structure, Types of organizational structure, Centralization and Decentralization, Departmentalization, Span of management, Concept of Authority, Responsibility and Accountability, Delegation.
Month: December			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
12	04	16	Unit 3 Introduction to RDBMS	Entity introduction, characteristics, Comparison between DBMS, RDBMS, Generalization and Aggregation Normalization- Functional dependency, types of normalization (1NF,2NF,3NF, BCNF), Data constraint- primary key, foreign key, unique key, null, not null, default key etc.
Month: January			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
12	04	16	Concurrency Control and Transaction Management	Transaction processing Concurrency - Concept of transaction processing, ACID properties, States of transaction, Serializability, Concurrency control, schemes , Locking techniques , Timestamp based protocols , Granularity of data items ,Deadlocks. Database recovery and Backup


Subject Teacher
(Ms.A.B.Chougule)




Head,
(Mr. V. B. Pujari)



MCA DEPARTMENT

Teaching Plan

A. Y. 2024-25

Name of Teacher: Dr.A.B.Chougule
Course Title: Computer Networks

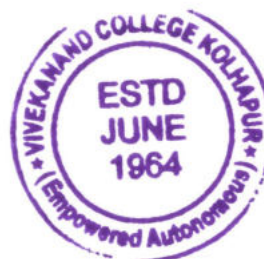
Class: MCA
Sem: I

Month: October			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
15	NA	15	Unit 1 Introduction to Computer Networks and Physical Layer	Networking Devices, Classification of Computer Networks, Network Protocol Stack (TCP/IP and IS OSI), Network Standardization and Examples Networks. Data Transmission Concepts, Analog and Digital Data Transmission, Communication media, Digital modulation techniques (FDMA, TDM, CDMA), components of computer networks-server, workstation, network interface unit, transmission media, hub, repeater, bridge, router, gateway, mode. Case study- Prepare/ present report on network components used in any selected organization/Institute/Company
Month: November			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
15	NA	15	Unit 2 Data Link layer	Data link layer design issues, Error Detection and Correction Codes, Data Link Protocols (Simplex Stop and-wait protocol for Error free and noisy channel) and

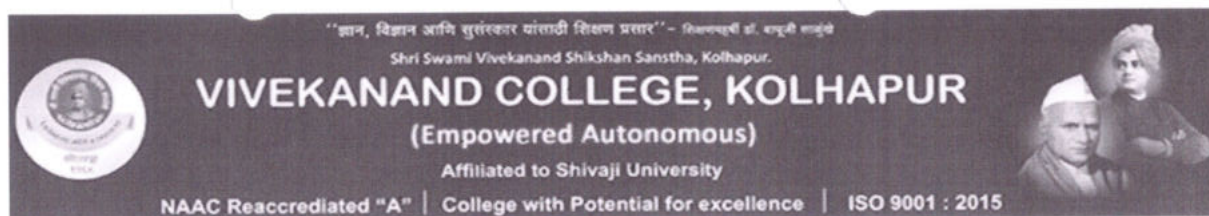


				Sliding window protocols. The Transport Layer The Transport Service, Elements of Transport Protocols, Congestion Control, The Internet Transport Protocol: UDP, The Internet Transport Protocols – TCP..
Month: December			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
15	NA	15	UNIT 3 Network Layer	Network Layer Design issues, Routing algorithms, Congestion Control Algorithms, Quality of Service, Internetworking and The Network Layer in the Internet, Store-and-forward packet switching, Services Provided to the Transport Layer, Implementation of Connectionless and Connection Oriented
Month: January			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
15	NA	15	UNIT 4 The application Layer	DNS: Domain Name Space, Domain Resource Records, Domain Name Servers. Electronic mail: SMTP, The World Wide Web: Static and dynamic web pages, web applications, HTTP, mobile web. Streaming audio and Video: Digital audio and video, streaming stored and live media, Content delivery: Content and internet traffic, content delivery networks, peer-to-peer networks.

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Subject Teacher
(Ms.A.B.Chougule)



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Head
(Mr. V. B. Pujari)



Department of MCA

Teaching Plan

A. Y. 2024-25

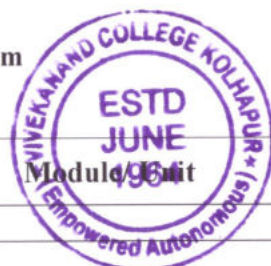
Name of Teacher: Mrs. A. O. Teli.

Course Title: Advance Operating system


Class: MCA

Sem: I

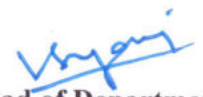
Month: October			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
12	NA	12	Unit 1 Design of Operating system	System Structure, User Perspective, Operating System Services Assumption about Hardware, the Kernel and Buffer Cache Architecture of UNIX Operating System, System Concepts, Buffer Headers, Structure of the Buffer Pool, Scenarios for Retrieval of the Buffer, Reading and Writing Disk Blocks, Advantages and Disadvantages of Buffer Cache, Operating system services and systems calls, system programs, operating system structure, operating systems generations.
Month: November			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
12	NA	12	Unit 2 File system	Concept of a file, access methods, directory structure, file system mounting, file sharing, protection. File system implementation: file system structure, file system implementation, directory implementation, allocation methods, free-space management, efficiency and performance, comparison of UNIX and windows
Month: December			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		

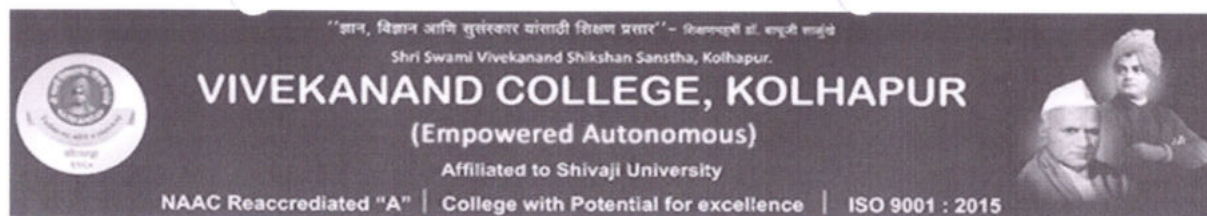


12	NA	12	Unit 3 Structure of processes and process control	Process States and Transitions Layout of System Memory, The Context of a Process, Manipulation of the Process Address Space, Sleep Process Creation/Termination, The User ID of a Process, Changing the Size of a Process. CONCURRENCY AND SYNCHRONIZATION: Process synchronization, critical section problem, Peterson's solution, synchronization hardware, semaphores, classic problems of synchronization, readers and writers problem, dining philosophers problem, monitors, synchronization examples(Solaris), atomic transactions
Month: January			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
12	NA	12	Unit 4 Distributed operating system	Design of distributed OS, Resource sharing, Distributed OS architectures, software layers, Architectural Model, The Operating System Layer, Protection, Processes and Threads, Communication and invocation, Distributed File System: File Service Architecture, Sun Network File System, the Andrew File System, and Recent Advances. System model, deadlock characterization, deadlock prevention, detection and avoidance, recovery from deadlock banker's algorithm


 Subject Teacher,
 Mrs.A. O. Teli.




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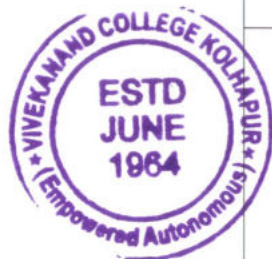


Department of MCA
Teaching Plan
A. Y. 2024-25


Name of Teacher: Mrs. A. O. Teli.
Course Title: Cyber Security

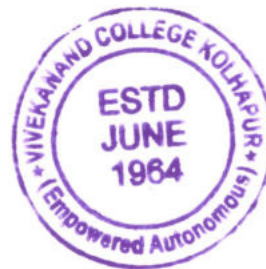
Class: MCA
Sem: I


Month: October			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
06	NA	06	Unit 1 Introduction to Cyber security	Introduction to Cyber security, Defining Cyberspace and Overview of Computer and Web-technology, Architecture of cyberspace, Communication and web technology.
Month: November			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
06	NA	06	Unit 1 Introduction to Cyber security	Internet, World wide web, Advent of internet, Internet infrastructure for data transfer and governance, Internet society, Regulation of cyberspace, Concept of cyber security, Issues and challenges of cyber security
Month: December			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
06	NA	06	Unit 2 Cybercrime and Cyber law	Cybercrime and Cyber law, Classification of cybercrimes, Common cybercrimes- cybercrime targeting computers and mobiles, cybercrime against women and children, financial frauds, social engineering attacks, malware and ransomware attacks, zero day and zero click attacks, Cybercriminals modus-operandi .



Month: January			Module/ Unit	Sub-units Planned
Lect.	Pract.	Total		
06	NA	06	Unit 2 Cybercrime and Cyber law	Reporting of cybercrimes, Remedial and mitigation measures, Legal perspective of cybercrime, IT Act 2000 and its amendments, Cybercrime and offences, Organisations dealing with Cybercrime and Cyber security in India, Case studies : Demonstration of email phishing attack and preventive measures.


Subject Teacher
(Mrs.A. O. Teli.)




Head of Department
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Annual Teaching Plan

Academic Year: 2024-2025

Term : II

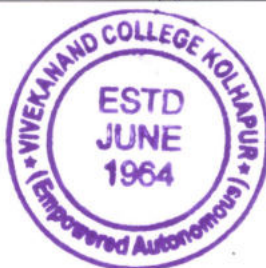
Department: MCA

Course Title: Information Security (Part-I) (MCA-I SEM-II)

Name of the teacher: Miss. Ashwini B. Chougule

Month : February			Module1:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Definition of security	Introduction, Definition of security, Assessing security, Security terminology , Historical developments, Structure of security, Introduction to Information Security, The Need for Security , Critical Characteristics of Information, NSTISSC Security Model, Components of an Information System, Securing the Components, Balancing Security and Access, The Security SDLC
Month : February-March			Module2:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Risk Management	Risk Management and Special requirements such as Emanation Security/TEMPEST Standards, Planning for Security, Rainbow Series Reports for DOD; DHS and CNSS guidance: Firewalls & VPNs, Need for Security, Business Needs, Threats, Attacks, Legal, Ethical and Professional Issues - An Overview of Computer Security - Access Control Matrix, Policy-Security policies, Confidentiality policies, Integrity policies and Hybrid policies.
Month : March-April			Module3:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Cryptography	Applications of cryptography, Terminology, Evolution of cryptography, Caesar ciphers, one-time pads, Operation of DES, AES ,Public-key cryptosystems, Topics in Information Systems Security :- Minimum privilege ,Compartmentalization , Dual controls ,Security perimeters, Trustworthy software, proof of design correctness, Single-points-of-failure, Covert channels, Inference, Risk Management: Identifying and Assessing Risk, Assessing and Controlling Risk - Systems: Access Control Mechanisms, Information Flow and Confinement Problem.
Month : April-May			Module4:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Technology: Blueprint for Security	Technology: Blueprint for Security, IDS and Access Control Cryptography, Physical Security including Emanations Security , Handling, labelling and destruction of Sensitive information) Implementing Security, Security and Personnel, Security Technology, IDS, Scanning and Analysis Tools, Cryptography, Access Control Devices, Physical Security, Security and Personnel, Secure programming languages- concepts structured multiprogramming, shared classes, cooperating sequential processes.

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HEAD
DEPARTMENT OF M. C. A.
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Annual Teaching Plan

Academic Year: 2024-2025

Term : II

Department: MCA

Course Title: Advance Java (Part-I) (MCA-I SEM-II)

Name of the teacher: Miss. Ashwini B. Chougule

Month : February-March			Module1:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Applet Fundamentals	<p>Applets: Applet Fundamentals – Applet Class – Applet Life Cycle – Steps for developing an Applet Program – Passing values through Parameters – Graphics in an Applet – Event handling.</p> <p>GUI Applications: Graphical User Interface – Creating Windows – Dialog Boxes – Layout Managers – AWT Component classes – Swing Component classes – Event handling – Other AWT Components – AWT graphics classes – Other Swing controls.</p> <p>Java Database Connectivity: Types of drivers – JDBC Architecture – JDBC Classes and Interfaces – Basic steps in developing JDBC application – Creating a new database and table with JDBC – Working with Database metadata.</p> <p>Servlets: Basics – Advantages – Servlet alternatives – strengths – Architectures – Servlet Life Cycle – Generic Servlet – HTTP Servlet – Passing parameters – Retrieving parameters – server side include – Cookies – Filters.</p>
Month : April-May			Module2:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Java Server Pages	<p>Java Server Pages: Overview – JSP and HTTP – JSP Engines – Working of JSP – Anatomy of JSP – JSP Syntax – Creating simple JSP page – Components of JSP – Implicit Objects.</p> <p>Web Programming – Client Side Programming: Client Side Programming technologies – form design with HTML and CSS – Client side Validation using JavaScript – Content Structuring using XML – Adding interactivity with AJAX.</p> <p>Web Programming – Server Side Programming: Web Servers – Handling Request and Response – Database Access – Session Management</p>



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Annual Teaching Plan

Academic Year: 2024-2025

Term : II

Department: MCA

Course Title: Advance Web Technology (Part-I) (MCA-I SEM-II)

Name of the teacher: Mrs. Ankita O. Teli

Month : February			Module1:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	INTRODUCTION TO XHTML	Introduction, Common Infrastructure, Semantics, structure, and APIs of HTML documents, Elements, links, Tabular data, Forms & Script elements, Web Application APIs, The XHTML syntax, User Interaction & Loading web pages.
Month : February-March			Module2:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	PHP Basics Introduction to Server-side programming	PHP Basics Introduction to Server-side programming, PHP variables, decision and looping with examples, PHP and HTML, Arrays, Functions, Browser control and detection, String, Form processing, File uploads, Dates and time zone, Working with Regular Expressions, Exception Handling, Working with JSON data, Object Oriented Programming with PHP
Month : March-April			Module3:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	PHP MVC Framework	Laravel Introduction to Laravel and MVC, Environment Setup, Routes, Namespaces, Controllers, Views, Request Response, Redirections, Forms, Session, Cookies, Database connectivity and CRUD Operations.
Month : April-May			Module4:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Introduction to Angular JS	Introduction to AngularJS: Expressions, Modules, Directives, Directive, Data Binding, Controllers, Scope, Filters, Services, AngularJS AJAX, Tables, Select Boxes. Introduction to Node JS: Advantages of Node JS, Setup Development Environment, Functions, Buffer, Module, Modules Types, Node Package Manager, Creating Web Server, File System, Debugging Node JS Application, Events.



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Annual Teaching Plan

Academic Year: 2024-2025

Term : II

Department: MCA

Course Title: Cloud Computing (Part-I) (MCA-I SEM-II)

Name of the teacher: Mrs. Ankita O. Teli

Month : February-March			Module1:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Cloud Computing Paradigms	Cloud Computing: Definition, roots of cloud computing, characteristics, cloud architecture, Computing Introduction to Cloud Computing, History and Evolution of Cloud Computing, Types of clouds, Private Public and hybrid clouds, Cloud Computing architecture, Cloud computing infrastructure
Month : April-May			Module2:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Cloud Computing Service Platforms	Cloud Computing Service Platforms – compute services, storage services, database services, application services, queuing services, e-mail services, notification services, media services, content delivery services, analytics services, deployment & management services, Security in cloud computing: issues, threats, data security and information security Cloud Computing Companies and Migrating to Cloud Web-based business services. Virtualization: benefits & drawbacks of virtualization, server virtualization, virtualization of – operating system, platform, CPU, network, application, memory and I/O devices etc

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DEPARTMENT OF M. C. A.
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Annual Teaching Plan

Academic Year: 2024-2025

Term : II

Department: MCA


Course Title: Advance Web Technology (Part-I) (MCA-I SEM-II)

Name of the teacher: Mrs. Ankita O. Teli

Month : February			Module1:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	INTRODUCTION TO XHTML	Introduction, Common Infrastructure, Semantics, structure, and APIs of HTML documents, Elements, links, Tabular data, Forms & Script elements, Web Application APIs, The XHTML syntax, User Interaction & Loading web pages.
Month : February-March			Module2:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	PHP Basics Introduction to Server-side programming	PHP Basics Introduction to Server-side programming, PHP variables, decision and looping with examples, PHP and HTML, Arrays, Functions, Browser control and detection, String, Form processing, File uploads, Dates and time zone, Working with Regular Expressions, Exception Handling, Working with JSON data, Object Oriented Programming with PHP
Month : March-April			Module3:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	PHP MVC Framework	Laravel Introduction to Laravel and MVC, Environment Setup, Routes, Namespaces, Controllers, Views, Request Response, Redirections, Forms, Session, Cookies, Database connectivity and CRUD Operations.
Month : April-May			Module4:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Introduction to Angular JS	Introduction to AngularJS: Expressions, Modules, Directives, Directive, Data Binding, Controllers, Scope, Filters, Services, AngularJS AJAX, Tables, Select Boxes. Introduction to Node JS: Advantages of Node JS, Setup Development Environment, Functions, Buffer, Module, Modules Types, Node Package Manager, Creating Web Server, File System, Debugging Node JS Application, Events.


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VIVEKANAND COLLEGE, KOLHAPUR
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Annual Teaching Plan

Academic Year: 2024-2025

Term : II

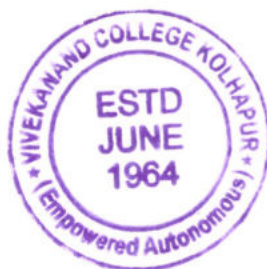
Department: MCA

Course Title: Cloud Computing (Part-I) (MCA-I SEM-II)

Name of the teacher: Mrs. Ankita O. Teli

Month : February-March			Module1:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Cloud Computing Paradigms	Cloud Computing: Definition, roots of cloud computing, characteristics, cloud architecture, Computing Introduction to Cloud Computing, History and Evolution of Cloud Computing, Types of clouds, Private Public and hybrid clouds, Cloud Computing architecture, Cloud computing infrastructure
Month : April-May			Module2:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Cloud Computing Service Platforms	Cloud Computing Service Platforms – compute services, storage services, database services, application services, queuing services, e-mail services, notification services, media services, content delivery services, analytics services, deployment & management services, Security in cloud computing: issues, threats, data security and information security Cloud Computing Companies and Migrating to Cloud Web-based business services. Virtualization: benefits & drawbacks of virtualization, server virtualization, virtualization of – operating system, platform, CPU, network, application, memory and I/O devices etc

(Signature of the Teacher)



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DEPARTMENT OF M. C. A.
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Annual Teaching Plan

Academic Year: 2024-2025

Term : II

Department: MCA

Course Title: Object Oriented Programming using Python (Part-I) (MCA-I SEM-II)

Name of the teacher: Mr. Vijay Bapuso Pujari

Month : February			Module1:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Introduction to Python	Introduction to Python – Advantages of using Python – Executing Python Programs – Python’s Core data types – Numeric Types – String Fundamentals, Operators and Operands in Python. (Arithmetic, relational and logical operators), Operator precedence .Expressions and Statements (Assignment statement); Taking input (using raw_input() and input()) and displaying output - print statement , Comments in Python. Conditional and Looping Construct if - else statement and nested if – else while, for, use of range function in for, Nested loops , break, continue.
Month : February-March			Module2:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Classes and Object Oriented programming with Python	Introduction to Python – Advantages of using Python – Executing Python Programs – Python’s Core data types – Numeric Types – String Fundamentals, Operators and Operands in Python. (Arithmetic, relational and logical operators), Operator precedence .Expressions and Statements (Assignment statement); Taking input (using raw_input() and input()) and displaying output - print statement , Comments in Python. Conditional and Looping Construct if - else statement and nested if – else while, for, use of range function in for, Nested loops , break, continue.
Month : March-April			Module3:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Database Handling using Python	Database Handling using Python – NumPy – Pandas – Machine learning with Python – Data Visualization in Python. Lists : Concept of mutable lists, creating, initializing and accessing the elements of list ,List operations. Tuples : Immutable concept, creating, initializing and accessing the elements in a tuple; Tuple functions: cmp(), len(), max(), min(), tuple() .Sets :Concept of Sets , creating, initializing and accessing the elements of ,Sets operation(Membership, union, intersection, difference, and symmetric difference. Dictionaries :Concept of key-value pair, creating, initializing and accessing the elements in a dictionary, Traversing, Dictionary functions & Methods.
Month : April-May			Module4:	Sub-Units Planned
Lecture	Practical	Total		



15	5	20	Introduction to Python	<p>Concept of class, object and instances Constructor, class attributes and destructors Real time use of class in live projects Inheritance , overlapping and overloading operators Adding and retrieving dynamic attributes of classes Programming using OOps support. Python Exceptions Handling What is Exception? Handling various exceptions using try....except...else ,Try-finally clause,Argument of an Exception and create self exception class,Python Standard Exceptions. Raising an exceptions, User-Defined Exceptions</p>
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Annual Teaching Plan

Academic Year: 2024-2025

Term : II

Department: MCA

Course Title: Software Engineering (Part-I) (MCA-I SEM-II)

Name of the teacher: Mr. Vijay Bapuso Pujari

Month : February			Module1:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Introduction to Software Engineering & Process Models	Software and Software Engineering: The nature of Software, The unique nature of WebApps, Software Engineering, The software Process, Software Engineering Practice, Software Myths. Process Models: A generic process model, Process assessment and improvement, Prescriptive process models: Waterfall model, Incremental process models, Evolutionary process models, Concurrent models, Specialized process models. Unified Process , Personal and Team process models
Month : February-March			Module2:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Requirement Engineering Requirements	Groundwork for Understanding of Software, Requirements; Overview of Eliciting Requirements, Developing Use Cases, Building the Requirements Model; Negotiating Requirements; Validating Requirements; Requirement Modelling Strategies; Overview of Flow Oriented Modelling, Behavioural Modelling
Month : March-April			Module3:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Design Concepts	Design Model; Architectural Styles, Architectural Design, Assessing Alternative architectural Designs, Architectural mapping Using Data Flow, User Interface Design: Golden Rules of User Interface Design; User Interface Analysis and Design; Interface Analysis; Interface Design steps
Month : April-May			Module4:	Sub-Units Planned
Lecture	Practical	Total		
15	5	20	Semantic Analysis:	Introduction, The place of software quality in project planning, Importance of software quality, Defining software quality, Software quality models, product versus process quality management. Software Project Estimation: Observations on Estimation, Decomposition Techniques, Empirical Estimation Models.

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