



Pragnya education trust's  
Pragnya college of management & computer studies,  
Handewadi, Pune-411060

BBA (CA) – Semester: I

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Business Statistics

prof.aadil rashid  
(SUBJECT CODE-105)

Sr.No.	Month	Week	Topic
1	OCT	2	<b>Chapter 1: Concept of statistics.</b> Role of statistics. In informatics business science Tabulation, Data condensations and tabulation
		3	Data Condensation and graphical Methods :Raw data , attributes and variables, classification ,frequency distribution ,cumulative frequency distributions.
		4	Graphs - Histogram, Frequency polygon. Diagrams - Multiple bar , Pie ,Subdivided bar.
2	NOV	1	<b>DIWALI VACATION</b>
		2	<b>Chapter 2 : Measures of central tendency and dispersion</b> Criteria for good measures of central tendency
		3	Arithmetic mean,
		4	Median and Mode for grouped and ungrouped data combined mean
3	DEC	1	
		2	<b>Chapter 3 : Measures of Dispersion</b> Concept of dispersion , Absolute and relative measure of dispersion
		3	Range, Variance, Standard deviation
		4	Coefficient of variation, Quartile Deviation , Coefficient of Quartile deviation.
4	Jan-22	1	<b>Chapter 4: Correlation and Regression( for ungrouped data)</b> Concept of correlation, positive & negative correlation
		2	Karl Pearson's Coefficient of correlation,
		3	Meaning of regression, Two regression equations, Regression coefficients and properties.



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BBA (CA)-- Semester: I

Teaching Plan 2021-2022

Name of Faculty:

prof fazilat jagot

Subject: Principles of Management

(SUBJECT CODE-102)

Sr.No.	Month	Week	Topic
1	OCT	2	<b>Chapter 1: Nature of management</b> 1.1 Meaning & Importance of management Functions of management Role of managers 1.2
		3	1.3 Management as an Art, Management as a Science, Management as a Profession and a Social System
		4	1.4 Concept of Management, Administration, Organization & Universality of Management
2	NOV	1	DIWALI VACATION
		2	<b>Chapter 2 : Evolution of management thoughts</b> 2.1 Concept of Managerial Thoughts
		3	2.2 Contribution of Frederick Taylor, Elton Mayo, Henry Fayol and Peter Drucker
		4	2.3 Indian Management ethos (Indian )anddifferent Styles for example (J.R.D Tata, DhirubhaiAmbani, N. R. Narayana Murthy, Verghese Kurien)...
3	DEC	1	<b>Chapter 3: Major managerial Functions</b> 3.1 Forecasting: Meaning, Need Types, Methods, Advantages, merits ,Disadvantages
		2	3.2 Planning: Meaning, Need Types ,methods, Advantages, merits, Disadvantages
		3	3.3 Organizing: Meaning, Concept, Delegation of Authority: Meaning, Importance Decentralization: Concepts, Meaning And, Importance
		4	3.4 Decision Making: Types, Process, and Techniques Directions nature and principles
4	Jan-22	1	3.5 Motivation: Meaning, Importance, Nature, Principles, and Theories 3.6 Controlling :Meaning, Needs, Process, Techniques
		2	<b>Chapter 4: Recent trends in Management</b> 4.1 Management of change , management of crises, Total Quality Management (TQM): Meaning, Merits, Demerits ,stress management (Principles ,concepts merits )
		3	4.2 Knowledge Management: Meaning, Merits, Demerits 4.3 Outsourcing: Meaning, Merits, Demerits

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BBA (CA) -- Semester: I

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Business Communication Skills

prof.amina qadri  
(SUBJECT CODE-101)

Sr.No.	Month	Week	Topic
1	OCT	2	<b>Chapter 1: Concept of Communication and Introduction to Communication</b> Role of Communication in social and economic system
		3	Need for effective communication, meaning and definition,
		4	Principles of effective communication, Barriers to communication and over comings
2	NOV	1	<b>DIWALI VACATION</b>
		2	<b>Chapter 2 : Methods and types of Communication</b> Methods of Communications]: Linguistics, Non- Linguistics and Para- Linguistics, Art of Listening
		3	Written communication, Forms of written communication. Qualities, difficulties in written communication,
		4	Constraints in developing effective written communication
3	DEC	1	Types or Channels of Communication: Internal- Vertical, Horizontal, Consensus, Grapevine
		2	External- Inward, Outward ,Merits and Limitations of methods & types of communication
		3	<b>Chapter 3: Business Correspondence</b> Concept ,need and functions of Business .Correspondence , Types of Business letters ,Layout Drafting of business
		4	Business Correspondence : Sales , Orders sales circulars and business promotion and resignation letterleave , application letters
4	Jan-22	1	Complaint , Credit verification, Correspondence with bank, Job application , and Reference check
		2	<b>Chapter 4: Analysis of different Media of Communication</b> Fax communication ,voice mail ,emails
		3	Tele conferencing , communication through social media

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BBA(CA) – Semester: 1

Teaching Plan 2021-2022

Name of Faculty:  
Subject: C-Programming

prof.sunita kanadikar  
[SUBJECT CODE-103]

Sr.No.	Month	Week	Topic
1	OCT	2	<b>Chapter 1: Introduction to C language</b> 1.1 History 1.2 Basic structure of C Programming 1.3 Language fundamentals 1.3.1 Character set, tokens 1.3.2 Keywords and identifiers 1.3.3 Variables and data types
		3	1.4 Operators 1.4.1 Types of operators 1.4.2 Precedence and associativity 1.4.3 Expression
		4	<b>Chapter 2 : Managing I/O operations</b> 2.1 Console based I/O and related built-in I/O functions 2.1.1 printf(), scanf() 2.1.2 getch(), getchar() 2.2 Formatted input and formatted output <b>LAB WORK</b>
2	NOV	1	<b>DIWALI VACATION</b>
		2	<b>Chapter 3 : Decision Making and looping</b> 3.1 Introduction 3.2 Decision making structure 3.2.1 If statement 3.2.2 If-else statement 3.2.3 Nested if-else statement 3.2.4 Conditional operator 3.2.5 Switch statement
		3	<b>LAB WORK</b> 3.3 <b>Loop control structures</b> 3.3.1 while loop 3.3.2 Do-while loop 3.3.3 For loop 3.3.4 Nested for loop
		4	<b>3.4 Jump statements</b> 3.4.1 break 3.4.2 continue 3.4.3 goto 3.4.4 exit <b>LAB WORK</b>
3	DEC	1	<b>Chapter 4: Programs through conditional and looping statements</b> Addition / Multiplication of integers Determining if a number is +ve / -ve / even / odd <b>LAB WORK</b>
		2	Maximum of 2 numbers, 3 numbers, Sum of first n numbers, given n numbers, Integer division, Digit reversing, Table generation for n, ab Factorial, sine series, cosine series, nCr, Pascal Triangle. Prime number, Factors of a number Other problems such as Perfect number, GCD of 2 numbers etc (Write algorithms and draw flowcharts) <b>LAB WORK</b>
		3	<b>Chapter 5: Arrays and Strings</b> 5.1 Introduction to one-dimensional Array 5.1.1 Definition 5.1.2 Declaration 5.1.3 Initialization 5.2 Accessing and displaying array elements 5.3 Finding smallest and largest number from array 5.4 Reversing array 5.5 Finding odd/even/prime number from array <b>LAB WORK</b>
		4	5.4 Introduction to two-dimensional Array 5.4.1 Definition 5.4.2 Declaration 5.4.3 Initialization 5.5 Accessing and displaying array elements 5.6 Matrices: Addition, Multiplication, Transpose, Symmetry, upper/lower triangular
4	Jan-22	1	5.7 Introductions to Strings 5.7.1 Definition 5.7.2 Declaration 5.7.3 Initialization 5.8 Standard library functions 5.9 Implementations without standard library functions <b>LAB WORK</b>
		2	<b>Chapter 6 : Functions</b> 6.1 Introduction 6.1.1 Purpose of function 6.1.2 Function definition 6.1.3 Function declaration 6.1.4 Function call 6.2 Types of functions 6.3 Call by value and call by reference 6.4 Storage classes <b>LAB WORK</b>
		3	<b>Chapter 7 : Introduction to pointer</b> 7.1 Definition 7.2 Declaration 7.3 Initialization 7.4 Indirection operator and address of operator 7.5 Pointer arithmetic 7.6 Dynamic memory allocation 7.7 Functions and pointers
		4	<b>Chapter 8: Structures</b> 8.1 Introduction to structure 8.2 Definition 8.3 Declaration 8.4 Accessing members 8.5 structure operations 8.6 nested structure <b>LAB WORK</b>

*Sunita Kanadikar*





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BBA (CA)- Semester: I

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Database Management Systems

prof.shilpa thakur  
(SUBJECT CODE-104)

Sr.No.	Month	Week	Topic
1	OCT	2	Chapter 1: File Structure and Organization 1.1 Introduction 1.2 Logical and Physical Files 1.2.1 File 1.2.2 File Structure 1.2.3 Logical and Physical Files Definitions
		3	1.3 Basic File Operations 1.3.1 Opening Files 1.3.2 Closing Files 1.3.3 Reading and Writing 1.3.4 Seeking 1.4 File Organization 1.4.1 Field and Record structure in file 1.4.2 Record Types 1.4.3 Types of file organization 1.4.3.1 Sequential 1.4.3.2 Indexed 1.4.3.3 Hashed LAB WORK
		4	1.5 Indexing 1.5.1 What is an Index? 1.5.2 When to use Indexes? 1.5.3 Types of Index 1.5.3.1 Dense Index 1.5.3.2 Sparse Index LAB WORK
2	NOV	1	DIWALI VACATION
		2	Chapter 2 : Database Management System 2.1 Introduction 2.2 Basic Concept and Definitions 2.2.1 Data and Information 2.2.2 Data Vs Information 2.2.3 Data Dictionary 2.2.4 Data Item or Field 2.2.5 Record
		3	2.3 Definition of DBMS 2.4 Applications of DBMS 2.5 File processing system Vs DBMS 2.6 Advantages and Disadvantages of DBMS LAB WORK
		4	2.7 Users of DBMS 2.7.1 Database Designers 2.7.2 Application programmer 2.7.3 Sophisticated Users 2.7.4 End Users 2.8 Views of Data 2.9 Data Models
3	DEC	1	2.9.1 Object Based Logical Model a. Object Oriented Data Model b. Entity Relationship Data Model 2.9.2 Record Base Logical Model a. Relational Model b. Network Model c. Hierarchical Model 2.10 Entity Relationship Diagram(ERD) 2.11 Extended features of ERD 2.12 Overall System structure LAB WORK
		2	Chapter 3: Relational Model 3.1 Introduction 3.2 Terms a. Relation b. Tuple c. Attribute d. Cardinality e. Degree of relationship set f. Domain 3.3 Keys 3.3.1 Super Key 3.3.2 Candidate Key 3.3.3 Primary Key 3.3.4 Foreign Key LAB WORK
		3	3.4 Relational Algebra Operations a. Select b. Project c. Union d. Difference e. Intersection f. Cartesian Product g. Natural Join
		4	Chapter 4: SQL (Structured Query Language) 4.1 Introduction 4.2 History Of SQL 4.3 Basic Structure 4.4 DDL Commands 4.5 DML Commands 4.6 Simple Queries 4.7 Nested Queries 4.8 Aggregate Functions
4	Jan-22	1	LAB WORK
		2	Chapter 5: Relational Database Design 5.1 Introduction 5.2 Anomalies of un normalized database 5.3 Normalization 5.4 Normal Form
		3	5.4.1 1 NF 5.4.2 2 NF 5.4.3 3 NF 5.4.3.4 BCNF LAB WORK

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BBA(CA) -- Semester: II

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Organizational Behavior & HRM

prof.geethy t  
(SUBJECT CODE-201)

Sr.No.	Month	Week	Topic
1	APR	2	<b>Chapter 1: Introduction to Organizational Behavior</b> Definition, concept, scope, Models of OB, Major trends in OB:-Total Quality management, Cultural diversity, Organizational change,
		3	Stress Management; Sources of Stress, Effects of Stress & Stress Management, Work life Balance and Quality of Work Life
		4	<b>Chapter 2: Introduction to HRM</b> Definition, Concepts, scope, importance
2	MAY	1	Functions ,Objectives & limitations, , Role of HR Manager
		2	Areas in which Human Resource Manager can be of assistance
		3	<b>Chapter 3: Procurement</b> HRP- Concept, Definition, Merits & Demerits, process , influencing factors of HRP
		4	Recruitment-Concept, Definition, sources of recruitment and their utility in identifying vacancies, methods, E-recruitment,
3	JUNE	1	Selection- Concepts, definition, process, Types of interviews and frequently asked interview questions from the candidate at each step and how to answer them, E- selection
		2	<b>Chapter 4: Training &amp; Development</b> Training & Development- Concept, definition, importance
			Methods, E- Training, Recent trends in Training

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BBA (CA) -- Semester: II

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Business Mathematics

prof.aadil rashid  
(SUBJECT CODE- 203)

Sr.No.	Month	Week	Topic
1	APR	2	<b>Chapter 1: Ratio, Proportion and Percentage</b> Ratio – Definition, Continued Ratio, Inverse Ratio, Proportion Continued Proportion, Direct Proportion, Inverse Proportion
		3	Variation, Inverse Variation, Joint Variation, Percentage, computation of Percentage.
		4	<b>Chapter 2: Profit and Loss</b> Terms and Formulae, Trade discount, Cash discount, Problems involving cost price, selling price, Trade discount and cash discount
2	MAY	1	Introduction to Commission and brokerage, Problems on commission and brokerage
		2	<b>Chapter 3: Interest and Annuity</b> Simple interest, Compound interest, Equated monthly Installments (EMI) by interest of reducing balance and flat interest methods and problems.
		3	Ordinary annuity, sinker fund, annuity due, present value and future value of annuity.
		4	Shares and Mutual Funds:- Concepts of Shares, face value, market value, dividend, brokerage, equity shares, preferential shares, bonus shares, examples and problems, Concept of Mutual Funds, Change in Net Asset Value (NAV), Systematic Investment Plan (SIP), Examples and Problems.
3	JUNE	1	<b>Chapter 4: Matrices and Determinant</b> Definition of Matrices, Types of Matrices, Algebra of Matrices, Determinant
		2	Adjoint of Matrix, Inverse of Matrix, System of Linear equations, Solution of System of Linear Equation by adjoint method (upto 3 variables only).
		3	<b>Chapter 5: Linear Programming Problem (LPP)</b> Concept of LPP, Formulation of LPP and solution of LPP by graphical method.
		4	Transportation Problem (T.P.): - Concept of Transportation Problem, Initial Basic Feasible Solution, North-West Corner Method (NWCM), Least Cost Method (LCM), Vogel's Approximation Method (VAM).



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BBA (CA)-- Semester: II

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Relational Data Base

prof.sunita kanadikar  
(SUBJECT CODE-204)

Sr.No.	Month	Week	Topic
1	APR	2	<b>UNIT 1: Introduction to RDBMS</b> Introduction to popular RDBMS product and their features      Difference between DBMS and RDBMS
		3	Relationship among application programs and RDBMS <b>LAB WORK</b>
		4	<b>Chapter 2: PL-SQL</b> of PL-SQL.      Overview Block      Data Types ,PLSQL. <b>LAB WORK</b>
2	MAY	1	Exception Handling, Functions and Procedures <b>LAB WORK</b>
		2	Cursor, Trigger Package <b>LAB WORK</b>
		3	<b>Chapter 3: Transaction Management</b> Transaction Concept      Transaction Properties <b>LAB WORK</b>
		4	Transaction States Execution      Concurrent <b>LAB WORK</b> Serializability
3	JUNE	1	<b>Chapter 4: Concurrency Control &amp; Recovery System</b> Lock Based Protocol      Timestamp Based Protocol
		2	Deadlock Handling Classification      Failure <b>LAB WORK</b>
		3	Recovery & Atomicity      Recovery with concurrent transaction <b>LAB WORK</b>

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BBA (CA) -- Semester: II

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Web Technology (HTML-JSS-CSS)

prof.shilpa thakur  
(SUBJECT CODE-205)

Sr.No.	Month	Week	Topic
1	APR	2	UNIT 1: Introduction 1.1 Clients-Servers and Communication 1.2 Internet-Basic, Internet Protocols (HTTP, FTP, IP)
		3	1.3 World Wide Web( WWW) 1.4 HTTP request message, HTTP response message LAB WORK
		4	Chapter 2: Web Design 2.1 Concepts of Effective web design 2.2 Web design issues including Browser Bandwidth and Cache 2.3 Display Resolution 2.4 Look and Feel of the Website 2.5. Page Layout and linking LAB WORK
2	MAY	1	2.6. User Centric Design 2.7 Sitemap 2.8 Planning and Publishing website 2.9 Designing effective navigation & LAB WORK
		2	Chapter 3 : HTML 3.1 Introduction to HTML 3.2 Basic HTML Structure 3.3 Common HTML Tags & LAB WORK 3.4 Physical and Logical HTML 3.5 Types of Images, client side and Server side Image Mapping
		3	3.6 List, Table, Frames 3.7 Embedding Audio, Video 3.8 HTML form and form elements 3.9 Introduction to HTML Front Page
		4	Chapter 4: Style Sheets 4.1. Need for CSS 4.2. Introduction to CSS 4.3 Basic Syntax & Structure & LAB WORK
3	JUNE	1	4.4 Using CSS- 4.4.1 Background images, colors, and Properties 4.4.2 Manipulating texts, using fonts, borders and boxes, margins, padding lists, positioning using CSS 4.5 Overview and features of CSS2 & CSS3
		2	Chapter 5: java Script 5.1 Introduction to Java Script 5.2 Identifier & Operator, Control Structure, functions 5.3 Document Object model (DOM) LAB WORK
		3	5.4 DOM objects (Window, navigator, history, location) 5.5 Predefined functions, math and String functions 5.6 Array in Java Scripts 5.7 Event handling in Java script & LAB WORK

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BBA(CA) -- Semester: II

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Financial Accounting

Dr.Asha yadwadkar  
(SUBJECT CODE-202)

Sr.No.	Month	Week	Topic
1	APR	2	Chapter 1: Financial Accounting and Scope, objectives. Definition
		3	Accounting concepts, principles and conventions
		4	Chapter 2: Accounting Transactions and Final Accounts system; Accounting Process, Journals, Ledger Voucher
2	MAY	1	Cash Book , subsidiary books
		2	Trial Balance preparation of Final Accounts of Sole Proprietorship
		3	Trading and Profit & Loss Account and Balance Sheet
		4	Chapter 3: Bank Reconciliation Statements Meaning of Bank Reconciliation Statements Bank Reconciliation Statements Importance of
3	JUNE	1	Preparation of Bank Reconciliation Statement
		2	Chapter 4: Computerized Accounting computers and Financial application Role of
		3	Accounting Software packages

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BBA(CA) -- Semester: III

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Software Engineering

prof.amina qadri  
(SUBJECT CODE-303)

Sr.No.	Month	Week	Topic
1	OCT	2	<b>Chapter 1: Introduction to System Concepts</b> 1.1 Definition 1.2 Basic Components 1.3 Elements of the System 1.4 Types of System 1.5 System Characteristics & <b>LAB WORK</b>
		3	<b>Chapter 2: Introduction to Software Engineering</b> 2.1 Definition of Software 2.2 Characteristics of Software 2.3 Definition of Software Engineering
		4	2.4 Need for Software Engineering 2.5 Mc Call's Quality factors 2.6 The Software Process 2.7 Software Product and Process 2.8 V& V Model & <b>LAB WORK</b>
2	NOV	1	<b>DIWALI VACATION</b>
		2	<b>Chapter 3 : Software Development Life Cycle</b> 3.1 Introduction 3.2 Activities of SDLC 3.3 A Generic Process Model 3.4 SDLC
		3	3.5 Waterfall Model 3.6 Incremental Process Models 3.7 Prototyping Model 3.8 Spiral Model <b>LAB WORK</b>
		4	<b>Chapter 4: Requirement Engineering</b> 4.1 Introduction 4.2 Requirement Elicitation 4.3 Requirement Elaboration 4.4 Requirement Gathering 4.5 Feasibility study 4.6 Fact 4.7 SRS Format <b>LAB WORK</b>
3	DEC	1	<b>Chapter 5: Analysis And Design Tools</b> 5.1 Decision Tree and Decision Table 5.2 Data Flow Diagrams (DFD) (Up to 2nd level) 5.3 Data Dictionary 5.4 Elements of DD
		2	5.5 Advantages and Disadvantages of DD 5.6 Input and Output Design 5.7 Structured Design Concepts <b>LAB WORK</b>
		3	5.8 Structure Chart 5.9 Coupling and Cohesion 5.10 Compulsory Case Studies on above topics <b>LAB WORK</b>
		4	<b>Chapter 6 : Software Testing</b> 6.1 Definition 6.2 Software testing Process 6.3 Unit Testing 6.4 Integration Testing 6.5 System Testing <b>LAB WORK</b>
	Jan-22	1	<b>Chapter 7: Software Maintenance and Software Re-Engineering</b> 7.1 Maintenance definition and types
		2	7.2 Software reengineering 7.3 Reverse Engineering 7.4 Restructuring and forward Engineering <b>LAB WORK</b>

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BBA (CA)-- Semester: III

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Angular JS

prof.shilpa thakur  
(SUBJECT CODE-304)

Sr.No.	Month	Week	Topic
1	OCT	2	<b>Chapter 1: AngularJS Core Concepts:</b> 1.1 What is AngularJS? 1.2 Difference between Javascript and Angular JS
		3	1.3 Advantages of Angular 1.4 AngularJS MVC Architecture 1.5 Introduction to SPA
		4	1.6 Setting up the environment 1.7 First App using MVC architecture <b>LAB WORK</b>
2	NOV	1	<b>DIWALI VACATION</b>
		2	<b>Chapter 2 : AngularJS Directives and Expressions:</b> 2.1 Understanding ng attributes ng-app, ng-init, ng-model, ng-controller, ng-bind, ng-repeat, ng-show, ng-readonly, ng-disabled, ng-if, ng-click <b>LAB WORK</b>
		3	2.2 Expression and Data Binding 2.3 Working with directives <b>LAB WORK</b>
		4	<b>Chapter 3: AngularJS Modules, Controller, View and Scope:</b> 3.1 Angular Modules 3.2 Angular Controller
3	DEC	1	3.3 Angular View 3.4 Scope hierarchy <b>LAB WORK</b>
		2	<b>Chapter 4 : Filter, Forms and Ajax Filters</b> 4.1 Built-in filters - upper case and lower case filters, date ,currency and number formatting ,orderBy, filter ,custom filter,
		3	4.2 Angular JS Forms – Working with AngularJS forms, model binding, form controller ,Using CSS classes, form events ,
		4	4.3 Ajax implementation using \$http
4	Jan-22	1	<b>LAB WORK</b>
		2	<b>Chapter 5: Dependency Injection, Services</b> 5.1 What is dependency injection? 5.2 Understanding services
		3	5.3 Using built-in service 5.4 Creating custom service, 5.5 Injecting dependency in service <b>LAB WORK</b>

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BBA (CA) -- Semester: III

Teaching Plan 2021-2022

Name of Faculty:  
Subject: PHP

prof.sunita kanadikar  
(SUBJECT CODE-304)

Sr.No.	Month	Week	Topic
1	OCT	2	<b>Chapter 1: PHP Basics</b> 1.1 Setting up a development environment. 1.2 Variables, numbers and strings
		3	1.3 Calculations with PHP 1.4 Using Arrays
		4	LAB WORK
2	NOV	1	DIWALI VACATION
		2	<b>Chapter 2 : Control Structures and Loops</b> 2.1 Conditional Statements
		3	2.2 Using Loops for Repetitive tasks 2.3 Combing Loops and Arrays
		4	LAB WORK
3	DEC	1	<b>Chapter 3 : Functions, Objects and Errors</b> 3.1 PHP's Built-in functions 3.2 Creating Custom functions 3.3 Passing Values by Reference 3.4 Understanding Objects
		2	LAB WORK
		3	<b>Chapter 4: Working with Forms</b> 4.1 Building a Form 4.2 Processing a Form's Data 4.3 Differences between POST and GET 4.4 Preserving User Input
		4	LAB WORK
4	Jan-22	1	<b>Chapter 5: More with Forms</b> 5.1 Dealing with checkboxes and radiobuttons 5.2 Retrieving values from lists 5.3 Validating and restricting data 5.4 Sending Email LAB WORK
		2	<b>Chapter 6: Storing and Protecting Data</b> 6.1 Setting and Reading Cookies 6.2 Protecting Online Files 6.3 Understanding Session Variables
		3	<b>Chapter 7: MySQL Database Overview</b> 7.1 phpMyAdmin Overview 7.2 Using a MySQL Database 7.3 Reading and Writing Data LAB WORK

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BBA (CA) – Semester: III

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Block Chain

prof.shilpa thakur  
(SUBJECT CODE-305)

Sr.No.	Month	Week	Topic
1	OCT	2	Chapter 1: Introduction To Blockchain 1.1 Digital Trust 1.2 Asset 1.3 Transactions 1.4 Distributed Ledger Technology 1.5 Types of network 1.6 Components of blockchain or DLT 1.7 Ledger 1.7.1. Blocks 1.7.2. Blockchain <b>LAB WORK</b>
		3	1.8 PKI and Cryptography 1.8.1. Private keys 1.8.2. Public keys 1.8.3. Hashing 1.8.4. Digital Signature
		4	1.9. Consensus 1.9.1. Byzantine Fault 1.9.2. Proof of Work 1.9.3. Poof of Stake 1.10. Security 1.10.1.DDos 1.11 Cryptocurrency 1.12.Digital Token <b>LAB WORK</b>
2	NOV	1	<b>DIWALI VACATION</b>
		2	Chapter 2 : How Blockchain Works 2.1 How Blockchain Works 2.2. Structure of Blockchain 2.3.Block 2.4. Hash 2.5. Blockchain 2.6. Distributed 2.7. Lifecycle of Blockchain
		3	2.8. Smart Contract 2.9. Consensus Algorithm 2.10 Proof of Work 2.11 Proof of Stake 2.12 Practical Byzantine 2.13 Fault Tolerance 2.14 Actors of Blockchain <b>LAB WORK</b>
		4	2.15 Blockchain developer 2.16 Blockchain operator 2.17 Blockchain regulator 2.18 Blockchain user 2.19 Membership service provider 2.20 Building A Small Blockchain Application <b>LAB WORK</b>
3	DEC	1	Chapter 3 : Introduction to Bitcoin 3.1 Currency 3.2 Double Spending 3.3 Cryptocurrency 3.4 P2P Payment Gateway 3.5 Wallet 3.6 Mining
		2	Chapter 4: Ethereum 4.1.Ethereum network 4.2. EVM 4.3.Transaction fee 4.4.Mist 4.5 Ether, gas
		3	4.6.Solidity - Smart contracts 4.7.Truffle 4.8.Web3 4.9.Design and issue Cryptocurrency 4.10. Mining 4.11. DApps 4.12. DAO
		4	<b>LAB WORK</b>
4	Jan-22	1	Chapter 5: Introduction To Hyperledger Fabric V1.1 5.1. Introduction to Hyperledger 5.2 What is Hyperledger 5.3 Why Hyperledger 5.4 Where can Hyperledger be used
		2	5.5 Hyperledger Architecture 5.6 Membership 5.7 Blockchain 5.8 Transaction 5.9 Chaincode 5.10 Hyperledger Fabric 5.11 Features of Hyperledger
		3	<b>LAB WORK</b>

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Handewadi, Pune-411060

BBA (CA) -- Semester: III

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Big data

prof.sunita kanadikar  
(SUBJECT CODE-305)

Sr.No.	Month	Week	Topic
1	OCT	2	<b>Chapter 1: INTRODUCTION TO BIG DATA</b> 1.1 Introduction to Big Data 1.2 Types of Digital Data
		3	1.3 Big Data Analytics 1.4 Application of Big data
		4	<b>LAB WORK</b>
2	NOV	1	<b>DIWALI VACATION</b>
		2	<b>Chapter 2 : INTRODUCTION TO DATA SCIENCE</b> 2.1 Basics of Data Analytics
		3	2.2 Types of Analytics - 2.2.1 Descriptive, 2.2.2 Predictive, 2.2.3 Prescriptive 2.2.4 Statistical Inference
		4	2.3 Populations and samples 2.3.1 Statistical modelling, 2.3.2 Probability 2.3.3 Distribution 2.3.4 Correlation 2.3.5 Regression
3	DEC	1	<b>LAB WORK</b>
		2	<b>Chapter 3 : INTRODUCTION TO MACHINE LEARNING</b> 3.1 Basics of Machine Learning Supervised Machine Learning 3.2 3.2.1 K- Nearest-Neighbours, 3.2.2 Naive Bayes 3.2.3 Decision tree 3.2.4 Support Vector Machines
		3	3.3.1 Cluster analysis 3.3.2 K means 3.3.3 EM Algorithm 3.3.4 Association Rule Mining 3.3.5 Apriori algorithms
		4	3.4 Regression Analysis 3.4.1 Linear Regression 3.4.2 Nonlinear Regression <b>LAB WORK</b>
4	Jan-22	1	<b>Chapter 4: DATA ANALYTICS WITH R/ WEKA MACHINE LEARNING</b>
		2	4.1 Introduction 4.2 Data Manipulation
		3	<b>LAB WORK</b>

*Sunita*



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BBA (CA) -- Semester: III

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Digital Marketing

prof.vishwanath jha  
(SUBJECT CODE-301)

Sr.No.	Month	Week	Topic
1	OCT	2	<b>Chapter 1: E-Commerce</b> 1.1 Introduction 1.2 Understanding Internet Marketing 1.3 Search Engine Optimization 1.4 Search Engine Marketing 1.5 Email Marketing 1.6 Digital Display Marketing
		3	<b>Chapter 2 : Introduction to New Age Media (Digital) Marketing</b> 2.1 What is Digital Marketing 2.2 Digital vs. Real Marketing 2.3 Digital Marketing Channels 2.4 Types of Digital Marketing(Overview)-Internet Marketing ,Social Media Marketing, Mobile Marketing
		4	<b>Chapter 3: Creating Initial Digital Marketing Plan</b> Creating Initial Digital Marketing Plan 3.1 Content management 3.2 SWOT analysis: Strengths, Weaknesses, Opportunities, andThreats
2	NOV	1	<b>DIWALI VACATION</b>
		2	3.3 Target group analysis EXERCISE: Define a target group <b>Chapter 4: Marketing using Web Sites</b> 4.1 Web design 4.2 Optimization of Web sites 4.3 MS Expression Web EXERCISE: Creating web sites, MS Expression
		3	<b>Chapter 5: Search Engine Optimization</b> 5.1 SEO Optimization 5.2 Writing the SEO content EXERCISE: Writing the SEO content
		4	<b>Chapter 6: Customer Relationship Management</b> 6.1 Introduction to CRM 6.2 CRM platform 6.3 CRM models EXERCISE: CRM strategy
3	DEC	1	<b>Chapter 7: Social Media Marketing</b> 7.1 Understanding Social Media Marketing 7.2 Social Networking (Facebook, LinkedIn, Twitter, etc.) Social Media (Blogging, Video Sharing - Youtube, Photosharing - Instagram, Podcasts) 7.3 Web analytics - levels
		2	7.4 Modes of Social Media Marketing 7.4.1 Creating a Facebook page Visual identity of a Facebook page , Types of publications, Facebook Ads , Creating Facebook Ads , Ads Visibility 7.4.2 Business opportunities and Instagram options,Optimization of Instagram profiles , Integrating Instagram with a Web Site and other social networks ,Keeping up with posts
		3	7.4.3 Business tools on LinkedIn Creating campaigns on LinkedIn , Analyzing visitation on LinkedIn
		4	7.4.4 Creating business accounts on YouTubeYouTube ,Advertising , YouTube Analytics 7.4.5 E-mail marketing E-mail marketing plan , E-mail marketing campaign analysis , Keeping up with conversions
4	Jan-22	1	7.5 Digital Marketing tools: Google Ads, FaceBook Ads, Google Analytic, Zapier, Google Keyword Planner EXERCISE: Social Media Marketing plan. EXERCISE: Making a Facebook page and Google Ads
		2	<b>Chapter 8: Digital Marketing Budgeting</b> 8.1 Resource planning 8.2 Cost estimating
		3	8.3 Cost budgeting 8.4 Cost control





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BBA (CA)-- Semester: III

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Data Structure

prof.shilpa thakur  
(SUBJECT CODE-302)

Sr.No.	Month	Week	Topic
1	OCT	2	<b>Chapter 1: Basic Concept and Introduction to Data Structure</b> 1.1 Pointers and dynamic memory allocation 1.2 Algorithm-Definition and characteristics 1.3 Algorithm Analysis -Space Complexity -Time Complexity - Asymptotic Notation Introduction to Data structure 1.4 Types of Data structure
		3	1.5 Abstract Data Types (ADT) Introduction to Arrays and Structure 1.6 Types of array and Representation of array 1.7 Polynomial - Polynomial Representation - Evaluation of Polynomial Addition of Polynomial 1.8 Self Referential Structure & LAB WORK
		4	<b>Chapter 2 : Linear data structures</b> 2.1 Introduction to Arrays - array representation 2.2 Sorting algorithms with efficiency - Bubble sort, Insertion sort, Merge sort, Quick Sort, Selection Sort 2.3 Searching techniques -Linear Search, Binary search LAB WORK
2	NOV	1	DIWALI VACATION
		2	<b>Chapter 3 : Linked List</b> 3.1 Introduction to Linked List 3.2 Implementation of Linked List - Static & Dynamic representation LAB WORK
		3	3.3 Types of Linked List - Singly Linked list(All type of operation) - Doubly Linked list (Create, Display) - Circularly Singly Linked list (Create, Display) - Circularly Doubly Linked list (Create, Display) 3.4 Generalized linked list - Concept and Representation LAB WORK
		4	<b>Chapter 4: Stacks</b> 4.1 Introduction 4.2 Representation- Static & Dynamic 4.3 Primitive Operations on stack
3	DEC	1	4.4 Application of Stack 4.5 Conversion of Infix, prefix, postfix , Evaluation of postfix and prefix 4.6 Simulating recursion using stack LAB WORK
		2	<b>Chapter 5: Queues</b> 5.1 Introduction 5.2 Representation - Static & Dynamic 5.3 Primitive Operations on Queue
		3	5.4 Circular queue, priority queue 5.5 Concept of doubly ended queue LAB WORK
		4	<b>Chapter 6: Trees</b> 6.1 Concept & Terminologies 6.2 Binary tree, binary search tree 6.3 Representation - Static and Dynamic 6.4 Operations on BT and BST - create, insert, delete, , counting leaf, non-leaf & total nodes ,
4	Jan-22	1	6.5 Tree Traversals (preorder, inorder, postorder) 6.6 Application - Heap sort 6.7 Height balanced tree- AVL trees- Rotations, AVL tree examples. LAB WORK
		2	<b>Chapter 7: Graph</b> 7.1 Concept & terminologies 7.2 Graph Representation - Adjacency matrix, adjacency list, inverse Adjacency list, adjacency multilist, orthogonal list
		3	7.3 Degree of Graph 7.4 Traversals - BFS and DFS 7.5 Applications - AOV network - topological sort, AOE network - critical Path & LAB WORK

shilpa



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BBA(CA) -- Semester: IV

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Networking

prof.sunita.kanadkar  
(SUBJECT CODE-401)

Sr.No.	Month	Week	Topic
1	APR	2	<b>Chapter 1: Introduction to Computer Network</b> 1.1 Basics of Computer Network 1.1.1 Definition 1.1.2 Goals 1.1.3 Applications, 1.1.4 Network Hardware –Broadcast, Point to Point 1.1.5 Components of Data Communication 1.2 Network Topologies 1.2.1 Mesh 1.2.2 Star, 1.2.3 Bus, 1.2.4 Ring 1.3 Types of Networks 1.3.1 LAN,MAN,WAN, 1.3.2 Internetwork, 1.3.3 Wireless Network
		3	1.4 Modes of Communication 1.4.1 Simplex, 1.4.2 Half Duplex, 1.4.3 Full Duplex 1.5 Server Based LANs & Peer-to-Peer LANs 1.6. Protocols and Standards 1.7. Network Software 1.7.1 Protocol Hierarchies, Layers, Peers, Interfaces 1.7.2 Design Issues of the Layers 1.7.3 Connection Oriented and Connectionless Service & LAB WORK
		4	<b>Chapter 2: Network Models</b> 2.1 OSI Reference Model : Functions of each Layer 2.2 TCP/IP Reference Model.Comparison of OSI and TCP/IP Reference Model 2.3 TCP/IP Protocol Suite
2	MAY	1	2.4 Addressing 2.4.1 Physical Addresses 2.4.2 Logical Addresses 2.4.3 Port Addresses, 2.4.4 Specific Addresses 2.5 IP Addressing 2.5.1 Classful Addressing, 2.5.2 Classless Addressing LAB WORK
		2	<b>Chapter 3: Transmission Media</b> 3.1 Introduction, Types of Transmission Media 3.2 Guided Media: 3.2.1 Twisted Pair Cable- Physical Structure, Categories, Connectors & Applications 3.2.2 Coaxial Cable – Physical Structure, Standards, Connectors & Applications
		3	3.2.3 Fiber Optic Cable- Physical Structure, Propagation Modes, Connectors & Applications 3.3 Unguided Media: 3.3.1 Electromagnetic Spectrum for Wireless Communication 3.3.2 Propagation Modes Ground, Sky, Line-of-Sight 3.3.3 Wireless Transmission Radio Waves, Microwaves, Infrared LAB WORK
		4	<b>Chapter 4: Wired and Wireless LAN</b> 4.1 IEEE Standards 4.2 Standard Ethernet MAC Sublayer, Physical Layer 4.3 Fast Ethernet – Goals, MAC Sublayer, Topology, Implementation 4.4 Gigabit Ethernet – Goals, MAC Sublayer, Topology, Implementation LAB WORK
3	JUNE	1	4.5 Ten-Gigabit Ethernet – Goals, MAC Sublayer, Physical Layer 4.6 Backbone Networks -Bus Backbone, Star Backbone 4.7 Virtual LANs Membership, IEEE standards advantages 4.8 Wireless LAN 4.8.1 IEEE 802.11 Architecture, 4.8.2 Bluetooth Architecture (Piconet, Scatternet)
		2	<b>Chapter 5: Network Devices</b> 5.1 Network Connectivity Devices 5.1.1 Active and Passive Hubs 5.1.2 Repeaters 5.1.3 Bridges- Types of Bridges 5.1.4 Switches 5.1.5 Router 5.1.6 Gateways
		3	<b>Chapter 6: Network Security</b> 6.1 Introduction 6.2 Need for Security 6.3 Security Services : 6.3.1 Message- Confidentiality, Integrity, Authentication, Non repudiation. 6.3.2 Entity (User)- Authentication LAB WORK
		4	6.4 Types of Attack 6.5 Cryptography, PlainText, Cipher Text, Encryption, Decryption, Symmetric Key and Asymmetric Key Cryptography 6.6 Substitution Techniques, Caesar Cipher, and Transposition Cipher (Problems should be covered.) 6.7 Firewalls- Packet Filter firewall, Proxy firewall 6.8 Steganography, Copyright LAB WORK

*Sunita*



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BBA(CA) -- Semester: IV

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Object Oriented Concepts Through CPP

prof.shilpa thakur  
(SUBJECT CODE-402)

Sr.No.	Month	Week	Topic
1	APR	2	<b>Chapter 1: Introduction to C++</b> 1.1 Basic concepts, features, advantages and applications of OOP 1.2 Introduction, applications and features of C++ 1.3 Input and Output operator in C++ 1.4 Simple C++ program <b>LAB WORK</b>
		3	<b>Chapter 2: Beginning with C++</b> 2.1 Data type and Key-words 2.2 Declaration of variables, dynamic initialization of variables, reference variable 2.3 Operators: 2.3.1 Scope resolution operator 2.3.2 Memory management operators 2.4 Manipulators 2.5 Functions: 2.5.1 Function prototyping, call by reference and return by reference 2.5.2 Inline functions 2.6 Default arguments <b>LAB WORK</b>
		4	<b>Chapter 3: Classes and Objects</b> 3.1 Structure and class, Class, Object 3.2 Access specifiers, defining data member 3.3 Defining member functions inside and outside class definition. 3.4 Simple C++ program using class 3.5 Memory allocation for objects 3.6 Static data members and static member functions 3.7 Array of objects, objects as a function argument 3.8 Friend function and Friend class 3.9 Function returning objects <b>LAB WORK</b>
2	MAY	1	<b>Chapter 4: Constructors and Destructors</b> 4.1 Constructors 4.2 Types of constructor : Default, Parameterized, Copy 4.3 Multiple constructors in a class 4.4 Constructors with default argument 4.5 Dynamic initialization of constructor 4.6 Dynamic constructor 4.7 Destructor & <b>LAB WORK</b>
		2	<b>Chapter 6: Inheritance</b> 6.1 Introduction 6.2 Defining Base class and Derived class 6.3 Types of Inheritance 6.4 Virtual Base Class 6.5 Abstract class 6.6 Constructors in derived class <b>LAB WORK</b>
		3	<b>Chapter 7 : Polymorphism</b> 7.1 Compile Time Polymorphism 7.1.1 Introduction, rules for overloading operators 7.1.2 Function overloading Operator Overloading unary and binary 7.1.4 Operator Overloading using friend function 7.1.3
		4	7.1.5 Overloading insertion and extraction operators 7.1.6 String manipulation using operator overloading 7.2 Runtime Polymorphism 7.2.1 this Pointer, pointers to objects, pointer to derived classes 7.2.2 Virtual functions and pure virtual functions <b>LAB WORK</b>
3	JUNE	1	<b>Chapter 8: Managing console I/O operations</b> 8.1 C++ streams and C++ stream classes 8.2 Unformatted I/O operations 8.3 Formatted console I/O operations 8.4 Output formatting using manipulators 8.5 User defined manipulators <b>LAB WORK</b>
		2	<b>Chapter 9: Working with Files</b> 9.1 Stream Classes for File operations 9.2 File operations - Opening, Closing and updating 9.3 File updating with random access. 9.4 Error handling during File operations 9.5 Command Line arguments <b>LAB WORK</b>
		3	<b>Chapter 10: Templates</b> 10.1 Introduction 10.2 Class Template and class template with multiple parameters 10.3 Function Template and function template with multiple parameter 10.4 Exception Handling Introduction
		4	<b>LAB WORK</b>

*Shilpa*



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BBA (CA) – Semester: IV

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Operating System

prof.surita kanadkar  
(SUBJECT CODE-403)

Sr.No.	Month	Week	Topic
1	APR	2	Chapter 1: Introduction to Operating System 1.1 What is operating system 1.2 Computer system architecture 1.3 Services provided by OS 1.4 Types of OS 1.5 Operating System Structure – Simple structure -Layered approach -Micro kernels -Modules 1.6 Virtual Machines – Introduction, Benefits LAB WORK
		3	Chapter 2: System Structure 2.1 User operating system interface 2.2 System Calls – Process or job control -Device Management -File Management 2.3 System Program 2.4 Operating System Structure LAB WORK
		4	Chapter 3: Process Management 3.1 Process Concept – The process - Process states - Process control block 3.2 Process Scheduling – Scheduling queues - Schedulers -Context Switch 3.3 Operation on Process – - Process Creation -Process Termination 3.4 Interprocess Communication – Shared memory system - Message passing systems. LAB WORK
2	MAY	1	Chapter 4: CPU Scheduling 4.1 What is scheduling 4.2 Scheduling Concepts – - CPU- I/O Burst Cycle - CPU Scheduler -Preemptive and Non-preemptive scheduling - Dispatcher 4.3 Scheduling criteria 4.4 Scheduling Algorithms – - FCFS - SJF (Preemptive& non-preemptive) - Priority Scheduling (Preemptive& Non- preemptive) - Round Robin Scheduling - Multilevel Queues - Multilevel Feedback queues LAB WORK
		2	Chapter 5: Process Synchronization 5.1 Introduction 5.2 Critical section problem 5.3 Semaphores – Concept - Implementation - Deadlock & Starvation - Types of Semaphores 5.4 Classical Problems of synchronization – -Bounded buffer problem - Readers & writers problem - Dining Philosophers problem LAB WORK
		3	Chapter 6: Deadlock 6.1 Introduction 6.2 Deadlock Characterization 6.3 Necessary Condition 6.4 Deadlock Handling Technique- -Deadlock Prevention - Deadlock Avoidance – - Safe State - Resource allocation graph algorithm - Bankers algorithm - Deadlock Detection - Recovery from Deadlock – -Process Termination -Resource Preemption LAB WORK
		4	Chapter 7: Memory Management 7.1 Background – -Basic hardware - Address binding - Logical versus physical address space - Dynamic loading - Dynamic linking and shared libraries 7.2 Swapping 7.3 Contiguous Memory Allocation – - Memory mapping and protection -Memory allocation - Fragmentation 7.4 Paging – -Basic Method - Hardware support - Protection - Shared Pages LAB WORK
3	JUNE	1	7.5 Segmentation – - Basic concept - Hardware 7.6 Virtual Memory Management – - Background - Demand paging - Performance of demand paging Page replacement – - FIFO - OPT - LRU - Second chance page replacement - MPU - LFU
		2	Chapter 8: File System 8.1 Introduction & File concepts (file attributes, Operations on files) 8.2 Access methods – - Sequential access - Direct access 8.3 File structure – - Allocation methods - Contiguous allocation - Linked Allocation - Indexed Allocation 8.4 Free Space Management – - Bit Vector - Linked List - Grouping LAB WORK
			Chapter 9: I/O System 9.1 Introduction 9.2 I/O Hardware 9.3 Application of I/O Interface 9.4 Kernel I/O Subsystem 9.5 Disk Scheduling – - FCFS - Shortest Seek time first - SCAN - C-SCAN - C- Look LAB WORK

*Sumit*





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BBA (CA)-- Semester: IV

Teaching Plan 2021-2022

Name of Faculty:  
Subject: NODE JS

prof.shilpa thakur  
(SUBJECT CODE-404)

Sr.No.	Month	Week	Topic
1	APR	2	<b>Chapter 1: Introduction to Node JS</b> 1.1 Introduction 1.2 What is Node JS? 1.3 Advantages of Node JS
		3	1.4 Traditional Web Server Model 1.5 Node.js Process Model 1.6 Install Node.js on Windows 1.7 Working in REPL <b>LAB WORK</b>
		4	<b>Chapter 2: Node JS Modules</b> 2.1 Functions 2.2 Buffer 2.3 Module
2	MAY	1	2.4 Module Types 2.5 Core Modules 2.6 Local Modules 2.7 Module.Exports <b>LAB WORK</b>
		2	<b>Chapter 3: Node Package Manager</b> 3.1 What is NPM ? 3.2 Installing Packages Locally
		3	3.3 Adding dependency in package.json 3.4 Installing packages globally 3.5 Updating packages <b>LAB WORK</b>
		4	<b>Chapter 4: Web server</b> 4.1 Creating web server 4.2 Handling http requests 4.3 Sending requests <b>LAB WORK</b>
3	JUNE	1	<b>Chapter 5: File System</b> 5.1 Fs.readFile 5.2 Writing a File 5.3 Writing a file asynchronously 5.4 Opening a file 5.5 Deleting a file 5.6 Other IO Operations <b>LAB WORK</b>
		2	<b>Chapter 6: Events</b> 6.1 EventEmitter class 6.2 Returning event emitter 6.3 Inhering events <b>LAB WORK</b>
		3	<b>Chapter 7: Database connectivity</b> 7.1 Connection string 7.2 Configuring 7.3 Working with select command 7.4 Updating records 7.5 Deleting records <b>LAB WORK</b>

*shilpa*



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BBA (CA) -- Semester: IV

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Advanced PHP

prof.sunita kanadikar  
(SUBJECT CODE-404)

Sr.No.	Month	Week	Topic
1	APR	2	<b>Chapter 1: Introduction to Object Oriented Programming in PHP</b> 1.1 Classes 1.2 Objects 1.3 Introspection 1.4 Serialization 1.5 Inheritance 1.6 Interfaces 1.7 Encapsulation <b>LAB WORK</b>
		3	<b>Chapter 2: Web Techniques</b> 2.1 Server information 2.2 Processing forms 2.3 Sticky forms 2.4 Setting response headers <b>LAB WORK</b>
		4	<b>Chapter 3: XML</b> 3.1 Introduction XML 3.2 XML document Structure 3.3 PHP and XML 3.4 XML parser 3.5 The document object model 3.6 The simple XML extension 3.7 Changing a value with simple XML <b>LAB WORK</b>
2	MAY	1	<b>Chapter 4: Ajax with PHP</b> 4.1 Understanding java scripts for AJAX 4.2 AJAX web application model 4.3 AJAX -PHP framework <b>LAB WORK</b>
		2	4.4 Performing AJAX validation 4.5 Handling XML data using php and AJAX 4.6 Connecting database using php and AJAX
		3	<b>Chapter 5: Introduction to Web Services</b> 5.1 Definition of web services 5.2 Basic operational model of web services, tools and technologies enabling web services 5.3 Benefits and challenges of using web services. 5.4 Web services Architecture and its characteristics
		4	5.5 Core building blocks of web services 5.6 Standards and technologies available for implementing web services 5.7 Web services communication models 5.8 Basic steps of implementing web services. <b>LAB WORK</b>
3	JUNE	1	<b>Chapter 6: PHP Framework (Joomla / Druple)</b> 6.1 Introduction to Joomla/Druple 6.1.1 Introduction 6.1.2 Joomla/Druple features 6.1.3 How Joomla/Druple works ? 6.1.4 The platform Components, Modules and Plugins
		2	6.2 Administering Joomla/Druple 6.2.1 Presentation Administration 6.2.2 Content Administration 6.2.3 System Administration <b>LAB WORK</b>
		3	6.3 Working with Joomla/Druple 6.3.1 Adding articles 6.3.2 Adding menus to point to content 6.3.3 Installing new templates
		4	<b>LAB WORK</b>

*Sunita*

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BBA (CA) – Semester: V

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Cyber Security

prof. shilpa thakur  
(SUBJECT CODE-501)

Sr.No.	Month	Week	Topic
1	OCT	1	Chapter 1: Introduction to Cyber Crime and Cyber Security Introduction 1.2 Cybercrime: Definition and Origin of the Word 1.3 Cybercrime and Information Security 1.4 Who are Cybercriminals? Classifications of Cybercrimes E-Mail Spoofing, Spamming, Cyber defamation, Internet Time Theft, Salami Attack/Salami Technique, Data Diddling, Forgery, Web Jacking, Newsgroup, Spams/Crimes Emanating from Usenet Newsgroup, Industrial Spying/Industrial Espionage <b>LAB WORK</b>
		2	Hacking, Online Friends, Computer Sabotage, Email Bombing/Mail Bombs, Computer Network Intrusions, Password Sniffing, Credit Card Frauds, Identity Theft Definition of Cyber Security 1.7 Vulnerability, Threats and Harmful acts 1.8 CIA Triad 1.9 Cyber Security Policy and Domains of Cyber Security Policy
		3	Chapter 2: - Cyber offenses and Cyberstalking Plan: Categories of Cybercrime Cyber Attacks: Reconnaissance, Passive Attack, Active Attacks, Scanning/Scrubbing (gathered Information, Attack (Gaining and Maintaining the System Access), Social Engineering, and Classification of Social Engineering. 2.2 Cyberstalking: Types of Stalkers, Cases Reported on Cyberstalking, Working of Stalking 2.3 Real-Life Incident of Cyber stalking 2.4 Cyberstalking and Cybercrimes <b>LAB WORK</b>
		4	2.1 Criminals
2	NOV	1	<b>DIWALI VACATION</b>
		2	2.5 Botnets: The Fuel for Cybercrime, Botnet, Attack Vector 2.6 Cybercrime: Mobile and Wireless Devices – Proliferation - Trends in Mobility 2.7 Credit Card Frauds in Mobile and Wireless Computing Era 2.8 Security Challenges Posed by Mobile Devices 2.9 Authentication Service Security 2.10 Attacks on Mobile/Cell Phones
		3	Chapter 3: Tools and Methods Used in Cybercrime Introduction 3.2 Proxy Servers and Anonymizers 3.3 Phishing 3.4 Password Cracking 3.5 Keyloggers and Spywares 3.6 Virus and Worms 3.7 Trojan Horses and Backdoors 3.8 Steganography 3.9 DoS and DDoS Attacks 3.10 SQL Injection <b>LAB WORK</b>
		4	Chapter 4: Cybercrimes and Cyber security: The Legal Perspectives Introduction 4.2 Cybercrime and the Legal Landscape around the World 4.3 Why Do We Need Cyberlaw: The Indian Context 4.4 The Indian IT Act 4.5 Challenges to Indian Law and Cybercrime Scenario in India 4.6 Consequences of not Addressing the Weakness in Information Technology Act 4.7 Digital Signatures and the Indian IT Act 4.8 Amendments to the Indian IT Act 4.9 Cybercrime and Parliament 4.10 Cyberlaw, Technology and Students: Indian Scenario
		5	Chapter 5: Cyber Forensics Introduction 5.2 Historical background of Cyber forensics 5.3 Digital Forensics Science 5.4 The Need for Computer Forensics 5.5 Cyber Forensics and Digital evidence 5.6 Forensics Analysis of Email 5.7 Digital Forensics Lifecycle 5.8 Challenges in Computer Forensics <b>LAB WORK</b>
3	DEC	1	Chapter 6: Cybersecurity: Organizational Implications Organizational Implications: Cost of cybercrimes and IPR issues 6.2 Web threats for organizations 6.3 Security and Privacy Implications from Cloud Computing 6.4 Social media marketing 6.5 Social computing and the associated challenges for organizations, Protecting people's privacy in the organization 6.6 Organizational guidelines for Internet usage and safe computing guidelines and computer usage policy 6.7 Incident handling Intellectual property in the cyberspace of cyber security. <b>LAB WORK</b>
		2	Chapter 7: Cybercrime: Illustrations, Examples and Mini-Cases 7.1 Real-Life Examples 7.2 Mini-Cases 7.3 Illustrations of Financial Frauds in Cyber Domain
		3	7.4 Digital Signature-Related Crime Scenarios 7.5 Digital Forensics Case Illustrations 7.6 Online Scams <b>LAB WORK</b>
		4	6.1
4	Jan-22	1	6.3
		2	6.8
		3	LAB WORK

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BBA (CA)- Semester: V

Teaching Plan 2021-2022

Name of Faculty:

prof. amina qadri

Subject: Object Oriented Software Engineering

(SUBJECT CODE-502)

Sr.No.	Month	Week	Topic
1	OCT	2	Chapter 1: Introduction and basics of Software Modelling 1.1 Software Life Cycle Models (Revision of SE) 1.2 System Concepts 1.3 Project Organization
		3	1.4 Communication in Project Management 1.5 Risk management in Project Management <b>LAB WORK</b>
		4	Chapter 2 : SRS Documentation 2.1 SRS Specification 2.2 Requirement Elicitation 2.3 Business Engineering <b>LAB WORK</b>
2	NOV	1	<b>DIWALI VACATION</b>
		2	Chapter 3 : Introduction to UML 3.1 Concept of UML 3.2 Advantages of UML
		3	Chapter 4: Object Oriented Concepts and Principles 4.1 What is Object Orientation? - Introduction, Object Classes and Instance, Polymorphism, Inheritance 4.2 Object Oriented System Development- Introduction, Function/Data Methods (With Visibility), Object Oriented Analysis, Object Oriented Construction <b>LAB WORK</b>
		4	4.3 Identifying the Elements of an Object Model 4.4 Identifying Classes and Objects 4.5 Specifying the Attributes (With Visibility) 4.6 Defining Operations 4.7 Finalizing the Object Definition <b>LAB WORK</b>
3	DEC	1	Chapter 5: Structural Modeling 5.1 Classes 5.2 Relationship 5.3 Common Mechanism 5.4 Class Diagram (Minimum three examples should be covered)
		2	5.5 Advanced Classes 5.6 Advanced Relationship 5.7 Interface 5.8 Types and Roles 5.9 Packages 5.10 Object Diagram (Minimum three examples should be covered)
		3	Chapter 6: Basic Behavioural Modeling 6.1 Interactions 6.2 Use Cases and Use Case Diagrams with stereo types (Minimum three examples should be covered) 6.3 Interaction Diagram (Minimum two examples should be covered) <b>LAB WORK</b>
		4	6.4 Sequence Diagram (Minimum two examples should be covered) 6.5 Activity Diagram (Minimum two examples should be covered) 6.6 State Chart Diagram (Minimum two examples should be covered)
4	Jan-22	1	Chapter 7 : Architectural Modelling 7.1 Component 7.2 Components Diagram (Minimum two examples should be covered) 7.3 Deployment Diagram (Minimum two examples should be covered) 7.4 Collaboration Diagram (Minimum two examples should be covered) <b>LAB WORK</b>
		2	Chapter 8: Object Oriented Analysis 8.1 Iterative Development and the Rational Unified Process 8.2 Inception 8.3 Understanding Requirements 8.4 Use Case Model From Inception to Elaboration 8.5 Elaboration <b>LAB WORK</b>
		3	Chapter 9: Object Oriented Design 9.1 The Booch Method, The Coad and Yourdon Method and Jacobson Method and Rumbaugh Method 9.2 The Generic Components of the OO Design Model The System Design Process - Partitioning the Analysis Model, Concurrency and Sub System Allocation, Task Management Component, The Data Management Component, The Resource Management Component, Inter Sub System Communication <b>LAB WORK</b>

*Signature*



Name of Faculty:  
Subject: Core Java

prof. surita kankar  
(SUBJECT CODE-503)

Sl.No.	Month	Week	Topic	
1	OCT	2	Chapter 1: Java Fundamentals Introduction to Java. 1.1 Features of Java 1.2 Basics of Java: Data types, variable, expression, operators, constant. 1.3 Structure of Java Program LAB WORK	1.1 LAB
		3	1.4 Execution Process of java Program 1.5 JOK Tools. 1.6 Command Line Arguments. 1.7 Array and String 1.7.1 Single Array & Multidimensional Array 1.7.2 String, String Buffer 1.8 Built In Packages and Classes 1.8.1 java.util - Scanner, Date, Math etc. 1.8.2 java.lang LAB WORK	LAB
		4	Chapter 2: Classes, Objects and Methods 2.1 Class and Object 2.2 Object reference 2.3 Constructor: Constructor Overloading	
2	NOV	1	DIWALI VACATION	
		2	2.4 Method: Method Overloading, Recursion, Passing and Returning object type Method 2.5 new operator, this and static keyword, finalize() method 2.6 Nested class, inner class, and Anonymous inner class. LAB WORK	
		3	Chapter 3 : Inheritance, Package and Collection 3.1 Overview of inheritance 3.2 inheritance in constructor 3.3 Inheriting Data members and Methods. 3.4 Multilevel Inheritance – method overriding Handle multilevel constructors LAB WORK	3.1 3.2 LAB
		4	3.5 Use of super and final keyword 3.6 Interface: 3.7 Creation and Implementation of an interface, Interface reference 3.8 Interface inheritance 3.9 Dynamic method dispatch 3.10 Abstract class 3.11 Comparison between Abstract Class and interface 3.12 Access control LAB WORK	LAB
3	DEC	1	3.13 Packages 3.13.1 Packages Concept 3.13.2 Creating user defined packages 3.13.3 Java Built in packages 3.13.4 Import statement, Static import	
		2	3.14 Collection 3.14.1 Collection Framework 3.14.2 Iterators: Collection, List, Set 3.14.3 Navigation: Enumeration, Iterator, ListIterator 3.14.4 Classes: LinkedList, ArrayList, Vector, HashSet LAB WORK	
		3	Chapter 4: File and Exception Handling 4.1 Exception and Error 4.2 Use of try, catch, throws, throws and finally 4.3 Built in Exception 4.4 Custom exception 4.5 Throwable Class Exception	
		4	File Handling 4.6 Overview of Different Streams (Byte Stream, Character stream) 4.7 Readers and Writers class 4.8 File Class LAB WORK	LAB
4	Jan-22	1	4.9 File Input Streams , File Output Stream 4.10 Input Stream Reader and Output Stream Writer class 4.11 FileReader and FileWriter class 4.12 Buffered Reader class LAB WORK	
		2	Chapter 5: Applet, AWT, Event and Swing Programming Applet 5.1 Introduction 5.2 Types of Applet 5.3 Applet Lifecycle 5.3.1 Creating Applet 5.3.2 Applet tag 5.4 AppletClasses 5.4.1 Color 5.4.2 Graphics 5.4.3 Font	
		3	AWT 5.5 Components and container used in AWT 5.6 Layout managers 5.7 Listeners and Adapter classes 5.8 Event Delegation model	
		4	Swing 5.9 Introduction to Swing Component and Container Classes 5.10 Displaying Swing Controls- JLabel and Image Icon, JTextField, The Swing Buttons JToggleButton, JToggleButton, JCheckBox, JRadioButton, JTabbedPane, JScrollBar, JList, JTable, JColorChooser, Swing Menus, Dialogs, JFileDialog, JFileChooser LAB WORK	LAB

*Surita*

Name of Faculty:  
Subject: Mongo DB

prof.sunita kanadikar

(SUBJECT CODE-504)

Sr.No.	Month	Week	Topic
1	OCT	2	<b>Chapter 1: Introduction to NoSQL Databases</b> 1.1 Introduction to NoSQL Databases 1.2 Difference between NoSQL and RDBMS 1.3 Need of NoSQL Databases
		3	1.4 Application of NoSQL Databases 1.5 Types of NoSQL Databases 1.6 What is MongoDB? 1.7 Features of MongoDB <b>LAB WORK</b>
		4	<b>Chapter 2 : MongoDB Basics</b> 2.1 Installing MongoDB 2.2 MongoDB Server and Database, MongoDB tools 2.3 Collection, Documents and Key-Values
2	NOV	1	<b>DIWALI VACATION</b>
		2	2.4 Data Modeling Concepts 2.4.1 Why Data Modeling? Data Modeling Approach 2.4.2 Analogy between RDBMS & MongoDB Data Model, MongoDB Data 2.4.3 Model (Embedding & Linking) 2.4.4 Challenges for Data Modeling in MongoDB 2.4.5 Data Model Examples and Patterns <b>LAB WORK</b>
		3	2.5 Mongo shell Commands to create, delete database, collection & documents 2.6 MongoDB Datatypes 2.7 Inserting and saving documents 2.7.1 Batch Insert 2.7.2 Insert Validation 2.8 MongoDB GUI like compass <b>LAB WORK</b>
		4	<b>Chapter 3: MongoDB CRUD Operations</b> 3.1 MongoDB Development Architecture 3.2 MongoDB Production Architecture 3.3 MongoDB CRUD Introduction, MongoDB CRUD Concepts 3.4 MongoDB CRUD Concerns (Read & Write Operations)
3	DEC	1	3.5 Concern Levels, Journaling 3.6 Cursor Query Optimizations, Query behaviour in MongoDB 3.7 Distributed Read & Write Queries 3.8 MongoDB CRUD Syntax & Queries <b>LAB WORK</b>
		2	<b>Chapter 4 :MongoDB Index and Aggregation</b> 4.1 Index Introduction, Index Concepts, Index Types, Index Properties 4.2 Index Creation and Indexing Reference 4.3 Introduction to Aggregation
		3	4.4 Approach to Aggregation 4.5 Types of Aggregation (Pipeline, MapReduce & Single Purpose) 4.6 Performance Tuning
		4	<b>LAB WORK</b>
4	Jan-22	1	<b>Chapter 5: MongoDB Administration</b> 5.1 Administration concepts in MongoDB 5.2 Monitoring issues related to Database 5.3 Monitoring at Server, Database, Collection level, and various Monitoring tools related to MongoDB
		2	5.4 Database Profiling, Locks, Memory Usage, No of connections, page fault 5.5 Backup and Recovery Methods for MongoDB 5.6 Export and Import of Data to and from MongoDB
		3	5.7 Run time configuration of MongoDB 5.8 Production notes/ best practices 5.9 Data Managements in MongoDB (Capped Collections/ Expired data from TTL), Hands on Administrative Tasks. <b>LAB WORK</b>

*Sunita*



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BBA (CA) – Semester: V

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Python

prof.sunita kanadikar  
(SUBJECT CODE-504)

Sr.No.	Month	Week	Topic
1	OCT	2	<b>Chapter 1: Introduction to Python</b> 1.1 History, feature of Python, setting up path, working with python interpreter, basic syntax, variable and data types, operators 1.2 Conditional statements-If, If-Else, nested if-else, Examples 1.3 Looping-For, While, Nested loops, Examples
		3	1.4 Control Statements-Break, Continue, Pass 1.5 String Manipulation-Accessing String, Basic Operations, String Slices, Function and Methods, Examples. 1.6 Lists-Introduction, accessing list, operations, working with lists, function & methods. <b>LAB WORK</b>
		4	1.7 Tuple-Introduction, Accessing tuples, operations working, function & methods, Examples. 1.8 Dictionaries-Introduction, Accessing values in dictionaries, working with dictionaries, properties, function, Examples. 1.9 Functions-Defining a function, calling a function, types of function, function arguments, anonymous function, global & local variable, Examples. <b>LAB WORK</b>
2	NOV	1	<b>DIWALI VACATION</b>
		2	<b>Chapter 2 : Modules and Packages</b> 2.1Built in Modules 2.1.1 Importing modules in python program 2.1.2 Working with Random Modules 2.1.3 E.g - built-ins, time, date time, calendar, sys, etc 2.2 User Defined functions
		3	2.2.1Structure of Python Modules 2.3 Packages 2.3.1 Predefined Packages 2.3.2User defined Packages
		4	<b>LAB WORK</b>
3	DEC	1	<b>Chapter 3 : Classes ,Objects and Inheritance</b> 3.1 Classes and Objects 3.1.1 Classes as User Defined Data Type 3.1.2 Objects as Instances of Classes 3.1.3 Creating Class and Objects 3.1.4 Creating Objects By Passing Values 3.1.5 Variables & Methods in a Class
		2	3.2 Inheritance 3.2.1 Single Inheritance 3.2.2 Multilevel Inheritance 3.2.3 Multiple Inheritance 3.2.4 Hybrid Inheritance 3.2.5 Hierarchical Inheritance 3.2.6 IS-A Relationship and HAS-A Relationship <b>LAB WORK</b>
		3	<b>Chapter 4: Exception Handling</b> 4.1 Python Exception 4.2 Common Exception 4.3 Exception handling in Python (try-except-else)
		4	4.4 The except statement with no exception 4.5 Multiple Exception 4.6 The try-finally clause 4.7 Custom Exception and assert statement <b>LAB WORK</b>
4	Jan-22	1	<b>Chapter 5: GUI Programming</b> 5.1 Introduction 5.2 Tkinter programming 5.4 Tkinter widgets 5.5 Frame 5.6 Button 5.7 Label 5.8 Entry <b>LAB WORK</b>
		2	<b>Chapter 6: Python Libraries</b> 6.1 Statistical Analysis- NumPy, SciPy, Pandas, StatsModels 6.2 Data Visualization- Matplotlib, Seaborn, Plotly 6.3 Data Modelling and Machine Learning- Scikit-learn, XGBoost, Eli5
		3	6.4 Deep Learning- TensorFlow, Pytorch, Keras 6.5 Natural Language Processing (NLP)- NLTK, SpaCy, Gensim <b>LAB WORK</b>

*Sunita*



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BBA(CA) – Semester: VI

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Recent Trends in Information Technology

prof. amina qadri

(SUBJECT CODE-601)

Sr.No.	Month	Week	Topic
1	APR	2	<b>Chapter 1: Introduction to recent trends</b> 1.1 Artificial Intelligence 1.2 Data Warehouse 1.3 Data Mining 1.4 Spark <b>WORK</b>
		3	<b>Chapter 2: Artificial Intelligence</b> 2.1 Introduction & Concept of AI 2.2 Applications of AI 2.3 Artificial Intelligence, Intelligent Systems, Knowledge-based Systems, AI Techniques
		4	2.4 Early work in AI & related fields. 2.5 Defining AI problems as a State Space Search 2.6 Search and Control Strategies 2.7 Problem Characteristics 2.8 AI Problem: Water Jug Problem, Tower of Hanoi, Missionaries & Cannibal Problem <b>LAB WORK</b>
2	MAY	1	<b>Chapter 3: AI Search Techniques</b> 3.1 Blind Search Techniques: BFS, DFS, DLS, Iterative deepening Search, Bidirectional Search, and Uniform cost Search
		2	3.2 Heuristic search techniques: Generate and test, Hill Climbing, Best First search, Constraint Satisfaction, Mean-End Analysis, A*, AO* <b>LAB WORK</b>
		3	<b>Chapter 4: Data Warehousing</b> 4.1 Introduction to Data warehouse 4.2 Structure of Data Warehouse 4.3 Advantages & uses of Data Warehouse 4.4 Architecture of Data Warehouse 4.5 Multidimensional data model
		4	4.6 OLAP Vs. OLTP 4.7 OLAP Operations 4.8 Types of OLAP Servers: ROLAP versus MOLAP versus HOLAP <b>LAB WORK</b>
3	JUNE	1	<b>Chapter 5: Data Mining</b> 5.1 Introduction to Data Mining 5.2 Data mining Task 5.3 Data mining issues 5.4 Data Mining versus Knowledge Discovery in Databases 5.5 Data Mining Verification vs. Discovery
		2	5.6 Data Pre-processing – Need, Data Cleaning, Data Integration & Transformation, Data Reduction 5.7 Accuracy Measures: Precision, recall, F-measure, confusion matrix, cross-validation, bootstrap 5.8 Data Mining Techniques 5.9 Frequent item-sets and Association rule mining: Apriori algorithm, FP tree algorithm 5.10 Graph Mining: Frequent sub-graph mining 5.11 Software for data mining: R, Weka, Sample applications of data mining 5.12 Introduction to Text Mining, Web Mining, Spatial Mining, Temporal Mining <b>LAB WORK</b>
		3	<b>Chapter 6: Spark</b> 6.1 Introduction to Apache Spark 6.2 Spark Installation 6.3 Apache Spark Architecture 6.4 Components of Spark
		4	6.5 Spark RDDs 6.6 RDD Operations: Transformation & Actions 6.7 Spark SQL and Data Frames 6.8 Introduction to Kafka for Spark Streaming <b>LAB WORK</b>





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BBA(CA) – Semester: VI

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Software Testing

prof.amina qadri

(SUBJECT CODE-602)

Sr.No.	Month	Week	Topic
1	APR	2	Chapter 1: Introduction 1.1 Introduction, Nature of errors, 1.2 Testing Objectives 1.3 Testing principles 1.4 Testing fundamentals,
		3	1.5 Software reviews, Formal Technical reviews, 1.6 Inspection and walkthrough 1.7 Testing Life Cycle <b>LAB WORK</b>
		4	Chapter 2: Approaches to Testing –Testing Methods 2.1 White Box Testing and types of white box testing 2.2 Test Case Design 2.3 Black Box Testing and types of black box testing 2.4 Gray Box Testing <b>LAB WORK</b>
2	MAY	1	Chapter 3: Software Testing Strategies &Software metrics 3.1 Software Testing Process 3.2 Unit Testing 3.3 Integration- Top-down ,Bottom up 3.4 System Testing
		2	3.6 Validation and Verification 3.7 Big Bang Approach 3.8 Sandwich approach 3.9 Performance Testing 3.10 Regression Testing 3.11 Smoke Testing 3.13 Load Testing <b>LAB WORK</b>
		3	Chapter 4: Software metrics 4.1 Introduction 4.2 Basic Metrics –size-oriented metric, Function –oriented metric 4.3 Cyclometric Complexity Metrics Examples on Cyclometric Complexity
		4	<b>LAB WORK</b>
3	JUNE	1	Chapter 5: Testing for Specialized Environments 5.1 Testing GUI's 5.2 Testing of Client/Server Architectures 5.3 Testing Documentation and Help Facilities 5.4 Testing for Real-Time Systems <b>LAB WORK</b>
		2	Chapter 6 : Testing Tools& Software Quality Assurance (Introduction) 6.1 JUnit, Apache JMeter, Win runner 6.2 Load runner, Rational Robot 6.3 Quality Concepts, Quality Movement, Background Issues, SQA activities
		3	6.4 Formal approaches to SQA 6.5 Statistical Quality Assurance 6.6 Software Reliability 6.7 The ISO 9000 Quality Standards 6.8 SQA Plan 6.9 Six sigma 6.10 Informal Reviews
		4	<b>LAB WORK</b>



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BBA (CA) – Semester: VI

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Dot Net Framework

prof.shilpa thakur  
(SUBJECT CODE-604)

Sr.No.	Month	Week	Topic
1	APR	2	<b>Chapter 1: Introduction to DOT NET FRAMEWORK</b> 1.1 What is Framework? 1.2 Architecture of Dot Net Framework 1.2.1 Common Language Runtime 1.2.2 Common Type System(CTS) 1.2.3 Common Language Specification(CLS) 1.2.3 JIT Compilers 1.2.3 Base Class Library 1.3 IDE (Integrated Development Environment) 1.4 Event Driven Programming
		3	<b>LAB WORK</b>
		4	<b>Chapter 2: Introduction to VB.Net</b> 2.1 Basics of VB.Net 2.1.1 Operators 2.1.2 Data Types 2.1.3 Control Structures
2	MAY	1	2.2Build Windows Applications 2.2.1 Controls: Form, TextBox, Button, Label, CheckBox, ListBox, ComboBox, RadioButton, DateTimePicker, MonthCalendar, Timer, ProgressBar, Scrollbar, PictureBox, ImageBox, ImageList, TreeView, ListView, Toolbar, StatusBar, DataGridView 2.2.2 Menus and PopUp Menu 2.2.3 Predefined Dialog controls: Color, Save, File, Open, Font 2.2.4 DialogBox - InputBox(), MessageBox, MsgBox() <b>LAB WORK</b>
		2	<b>Chapter 3: Introduction to C#</b> 3.1 Language Fundamentals 3.1.1 Data type and Control Constructs 3.1.2 Value and Reference Types, Boxing 3.1.3 Arrays 3.1.4 String class and its various operations 3.1.5 Functions 3.2 Object Oriented Concepts 3.2.1 Defining classes and Objects
		3	3.2.2 Access modifiers 3.2.3 Constructors 3.2.4 Inheritance 3.2.5 Interface 3.2.6 Abstract Class 3.2.7 Method Overloading and Overriding 3.2.8 Delegates <b>LAB WORK</b>
		4	<b>Chapter 4: Introduction to ASP.NET</b> 4.1 What is ASP.NET? 4.2 ASP.NET Page Life Cycle 4.3 Architecture of ASP.NET 4.4 Forms, WebPages, HTML forms, 4.5 Request & Response in Non-ASP.NET pages. 4.6 Using ASP.NET Server Controls 4.7 Overview of Control structures 4.8 Functions
3	JUNE	1	4.9 HTML events 4.9.1 ASP.NET Web control events 4.9.2 Event driven programming and postback 4.10 Introduction to Web forms 4.10.1 Web Controls 4.10.2 Server Controls 4.10.3 Client Controls 4.10.4 Navigation Controls 4.10.5 Validations 4.10.6 Master Page 4.10.7 State Management Techniques <b>LAB WORK</b>
		2	<b>Chapter 5: Architecture of ADO.NET</b> 5.1 Basics of ADO.NET 5.1.1 Connection Object 5.1.2 Command Object
		3	5.1.3 Dataset 5.1.4 Data Table 5.1.5 Data Reader Object 5.1.6 Data Adapter Object 5.2 DataGridView & Data Binding: Insert, Update, Delete records 5.3 Navigation Using Data Source
		4	<b>LAB WORK</b>

*Shilpa*



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BBA (CA)– Semester: VI

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Android Programming

prof.nashita kanadkar  
(SUBJECT CODE-694)

Sr.No.	Month	Week	Topic	
1	APR	2	<b>Chapter 1: INTRODUCTION TO Android Programming</b> 1.1 What is Android? 1.2 History and Versions 1.3 Android Architecture 1.4 Basic Building Blocks 1.5 Android API Levels 1.6 Application Structure 1.7 First Hello World Program <b>WORK</b>	LAB
		3	<b>Chapter 2: ACTIVITY, INTENT AND LAYOUT</b> 2.1 Introduction to Activity 2.2 Activity life cycle 2.3 Introduction to Intent 2.4 Types of Intent (Implicit and Explicit Intent)	
		4	2.5 Layout Manager 2.5.1 View and View Group 2.5.2 Linear Layout 2.5.3 Relative Layout 2.5.4 Table Layout 2.5.5 Grid Layout 2.5.6 Constraint Layout 2.5.7 Frame Layout 2.5.8 Scroll Layout <b>WORK</b>	LAB
2	MAY	1	<b>Chapter 3: BASIC UI DESIGN</b> 3.1 Button (push Button, Check Box, Radio Button, Toggle Button, Image Button) 3.2 Text Fields 3.3 Spinner 3.4 List View 3.5 Toast 3.6 Scroll View 3.6 ProgressBar View <b>WORK</b>	LAB
		2	3.7 Auto Complete Text View 3.8 Dialog Box □ 3.8.1 Alert Dialog. □ 3.8.2 DatePicker Dialog. □ 3.8.3 TimePicker Dialog. □ 3.8.4 Custom Dialog.	
		3	<b>Chapter 4: ADAPTER AND MENU</b> 4.1 Base Adapter 4.2 Array Adapter 4.3 ListView using Adapter 4.4 GridView using Adapter 4.5 Photo Gallery using Adapter Using Menu with Views 4.6.1 Option Menu 4.5.2 Context Menu 4.5.3 Popup Menu <b>WORK</b>	4.1 Base 4.6 LAB
		4	<b>Chapter 5: THREADS AND NOTIFICATION</b> 5.1 Worker thread 5.2 Handlers & Runnable 5.3 AsyncTask (in detail) 5.4 Broadcast Receiver 5.5 Services 5.5.1 Service life Cycle 5.5.2 Bounded Service 5.5.2 Unbounded Service 5.6 Notification 5.7 Alarm 5.8 Accessing Phone services (Call, SMS) <b>WORK</b>	LAB
3	JUNE	1	<b>Chapter 6: CONTENT PROVIDER</b> 6.1 Content Providers 6.2 SQLite Programming 6.3 SQLiteOpenHelper 6.4 SQLiteDatabase 6.5 Cursor 6.6 Searching for content 6.7 Adding, changing, and removing content 6.8 Building and executing queries 6.9 Android JSON <b>WORK</b>	LAB
		2	<b>Chapter 7: LOCATION BASED SERVICES AND GOOGLE MAP</b> 7.1 Display Google Map 7.1.1 Creating the project 7.1.2 Obtaining the Maps API Key 7.1.3 Displaying the Map 7.1.4 Displaying the Zoom Control 7.1.5 Changing Views 7.1.6 Navigating to a specific location 7.1.7 Adding Markers 7.1.8 Getting the location that was touched 7.1.9 Geocoding and Reverse Geocoding 7.2. Getting Location Data 7.3 Monitoring a Location	
		3	LAB WORK	

*Sunil*



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BBA (CA) – Semester: VI

Teaching Plan 2021-2022

Name of Faculty:  
Subject: Advanced Java

prof.sunita kanadikar

(SUBJECT CODE- 603)

Sr.No.	Month	Week	Topic
1	APR	2	<b>Chapter 1: JDBC</b> 1.1 Introduction 1.2 JDBC Architecture. 1.3 JDBC Process 1.4 Working with ResultSet Interface.
		3	<b>LAB WORK</b>
		4	<b>Chapter 2: Multithreading:</b> 2.1 Introduction to Multithreading 2.2 Thread creation: Thread Class, Runnable Interface. 2.3 Life cycle of Thread. 2.4 Thread Priority. 2.5 Execution of Thread Application. 2.6 Synchronization and Interthread communication.
2	MAY	1	<b>LAB WORK</b>
		2	<b>Chapter 3: Networking:</b> 3.1 Overview of Networking. 3.2 Networking Basics: Port Number, Protocols and classes. 3.3 Sockets, Reading from and Writing to a Socket.
		3	<b>LAB WORK</b>
		4	<b>Chapter 4: Servlet and JSP</b> 4.1 Introduction to Servlet 4.2 Types of Servlet: Generic Servlet and Http Servlet 4.3 Life cycle of servlet 4.4 Session Tracking. 4.5 Servlet with database
3	JUNE	1	JSP 4.6 Introduction to JSP. 4.7 JSP Life Cycle. 4.8 Components of JSP. 4.9 JSP with Database <b>LAB WORK</b>
		2	<b>Chapter 5: Spring &amp; Hibernate</b> <b>Spring:</b> 5.1 Introduction 5.2 Applications and Benefits of spring 5.3 Architecture and Environment Setup 5.4 Hello World Example 5.5 Core Spring- IoC Containers, Spring Bean Definition, Scope, Lifecycle
			<b>Hibernate</b> 5.6 Architecture and Environment 5.7 Configuration, Sessions, Persistent Class 5.8 Mapping Files, Mapping Types 5.9 Examples
			<b>LAB WORK</b>

*Sunita*