

E.M. GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
An Autonomous Institution -Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A+ & CGPA 3.51 by NAAC



LESSON PLAN

2022-2023

DEPARTMENT OF **COMPUTER APPLICATIONS**

(UG –Odd & Even Semester)

DEPARTMENT OF BCA

SEM I




E.M.G. YADAVA WOMEN'S COLLEGE, MADURAI - 625 014.
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DEPARTMENT OF COMPUTER APPLICATIONS


LESSON PLAN

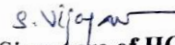
2022 ODD SEMESTER

TITLE : Programming in C
SUB CODE : 22OUCA11
NAME OF THE STAFF : P. Indhuja

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
July 2022	I	Overview of C: History of C - Importance of C - Sample Programs-Basic Structure of C Programs- Programming Style-Executing a 'C' Program- UNIX System-MS-DOS System- Windows System. Constants, Variables and Data Types: Introduction - Character Set - C Tokens - Keywords and Identifiers - Constants - Variables - Data Types - Declaration of Variables - Declaration of Storage Class - Assigning Values to Variables - Defining Symbolic Constants - Declaring a Variable as Constant - Declaring a Variable as Volatile. Operators and Expressions: Introduction - Arithmetic Operators - Relational Operators - Logical Operators - Assignment Operators - Increment and Decrement Operators - Conditional Operators - Bitwise Operators - Special Operators-Arithmetic Expressions-Evaluation of Expressions-Precedence of Arithmetic Operators- Some Computational Problems-Type Conversions in Expressions-Operator Precedence and Associativity.	12 HRS	Chalk and Talk	 (P. INDHUJA)
		Managing Input and Output Operations: Introduction - Reading a Character - Writing a Character - Formatted Input - Formatted Output. Decision Making and Branching: Introduction - Decision Making with If Statement - Simple If Statement - The If... Else statement - Nesting of If			

Aug 2022	II	... Else Statements – The Else If Ladder – The Switch Statement – The ? Operator – The Goto Statement – Decision Making and Looping: Introduction – The while Statement – The do Statement – The for Statement – Jumps in Loops-Concise Test Expression.	12 HRS	Chalk and Talk	P. Indhuja (P. INDHUJA)
Sep 2022	III	Arrays Introduction – One-Dimensional Arrays – Declaration of One-Dimensional Arrays – Initialization of One-Dimensional Arrays – Two-Dimensional Arrays – Initializing Two-Dimensional Arrays – Multi-Dimensional Arrays – Dynamic Arrays – More about Arrays. Character Arrays and Strings Introduction – Declaring and Initializing String Variables – Reading Strings from Terminal – Writing Strings to Screen – Arithmetic Operations on Characters – Putting Strings Together – Comparison of Two Strings – String-Handling Functions – Table of Strings- Other Features of String	12 HRS	Chalk and Talk, PPT	P. Indhuja (P. INDHUJA)
Oct 2022	IV	User-Defined Functions: Introduction – Need for User-Defined Functions – A Multi-Function Program – Elements of User-Defined Functions – Definition of Functions – Return Values and Their Types – Function Calls – Function Declaration – Category of Functions – No Arguments and No Return Values – Arguments and but No Return Values – Arguments with Return Values – No Arguments and but Returns a Value – Nesting of Functions – Recursion – Passing Arrays to Functions – Searching and Sorting – Passing Strings to Functions- The Scope, Visibility and Lifetime of Variables – Multifile Programs Structures and Unions: Introduction – Defining a Structure – Declaring Structure Variables – Accessing Structure Members – Structure Initialization – Copying and Comparing Structure Variables – Operations on Individual Members – Arrays of Structures – Arrays within Structures – Structures within Structures – Structures and Functions – Unions – Size of Structures – Bit Fields.	12 HRS	Chalk and Talk, Assignment	P. Indhuja (P. INDHUJA)

Nov 2022	V	<p>Pointers: Introduction - Understanding Pointers - Accessing the Address of a Variable - Declaring Pointer Variables - Initialization of Pointer Variables - Accessing a Variable through its Pointer - Chain of Pointers - Pointer Expressions - Pointer Increments and Scale Factor - Pointers and Arrays - Pointers and Character Strings - Array of Pointers - Function that Return Multiple Values-Pointers as Function Arguments - Functions Returning Pointers - Pointers to Functions - Pointers and Structures - Troubles with Pointers.</p> <p>File Management in C: Introduction - Defining and Opening a File - Closing a File - Input/Output Operations on Files - Error Handling during I/O Operations - Random Access to Files - Command Line Arguments.</p>	12 HRS	Chalk and Talk	 (P-INDHJ*)
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DEPARTMENT OF COMPUTER APPLICATIONS

LESSON PLAN

2022 EVEN SEMESTER

TITLE : Object Oriented Programming with C++
 SUB CODE : 22OUCA21
 NAME OF THE STAFF : P. Indhuja

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
Dec 2022 & Jan 2023	I	Principles of Object-Oriented Programming: Object - oriented Programming Paradigm - Basic concepts of Object Oriented Programming - Benefits of OOP - Object-Oriented Languages. Tokens , Expressions and Control Structures : Introduction - Tokens - Keywords - Identifiers and Constants - Basic Data Types - User - Defined Data Types - Storage Classes - Derived Data Types = Symbolic Constants = Type Compatibility = Declaration of Variables - Dynamic Initialization of Variables - Reference Variables - Operators in C++ - Scope Resolution Operator - Member Dereferencing Operators - Memory Management Operators - Manipulators - Type Cast Operator - Expression and their Types.	12 HRS	Chalk and Talk	P. Indhuja (P. INDHUJA)
Jan 2023	II	Functions in C++ : Introduction - The Main Function - Function Prototyping - Call by Reference - Return by Reference - Inline Functions - Default Arguments - Const Arguments - Recursion - Function Overloading - Friend and Virtual Functions - Math Library Functions. Classes and Objects : Introduction - Specifying a Class - Defining Member Functions - A C++ Program with Class - Private Member Functions - Arrays within a Class - Memory Allocation for Objects - Static Data Members - Static Member Functions - Arrays of Objects - Objects as Function Arguments - Friendly Functions - Returning Objects.	12 HRS	Chalk & Talk, Assignment	P. Indhuja P. INDHUJA

Feb 2022	III	Arrays: Introduction – One-Dimensional Arrays – Declaration of One-Dimensional Arrays – Initialization of One-Dimensional Arrays – Two-Dimensional Arrays – Initializing Two-Dimensional Arrays – Multi-Dimensional Arrays – Dynamic Arrays – More about Arrays. Character Arrays and Strings: Introduction – Declaring and Initializing String Variables – Reading Strings from Terminal - Writing Strings to Screen – Arithmetic Operations on Characters – Putting Strings Together – Comparison of Two Strings – String-Handling Functions – Table of Strings- Other Features of String	12 HRS	Chalk & Talk, PPT	P. Indira (P. INDIRA)
Mar 2023	IV	Constructors and Destructors : Introduction – Constructors – Parameterized Constructors – Multiple Constructors in a Class – Constructors with Default Arguments – Dynamic Initialization of Objects – Copy Constructor – Dynamic Constructors – Constructing Two Dimensional Arrays – Const Objects – Destructors Operator Overloading and Type Conversion Introduction – Defining Operator Overloading – Overloading Unary Operators – Overloading Binary Operators – Manipulation of Strings using Operators – Rules for Overloading Operators	12 HRS	Chalk & Talk, PPT	P. Indira (P. INDIRA)
Apr 2023	V	Managing Console I/O Operations Introduction – C++ Streams – C++ Stream Classes – Unformatted I/O Operations - Formatted Console I/O Operations – Managing Output with Manipulators . Working with Files Introduction – Classes for File Stream Operations – Opening and Closing a File – Detecting end-of-file – More about Open(): File Modes – File Pointers and their Manipulations – Sequential Input and Output Operations – Updating a File : Random Access – Error Handling during File Operations - Command-line Arguments.–	12 HRS	Chalk & Talk	P. Indira (P. INDIRA)

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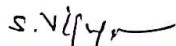
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DEPARTMENT OF COMPUTER APPLICATIONS
LESSON PLAN
2022 ODD SEMESTER

TITLE : Core- Digital Principles & Computer Organization
SUB CODE :17J31 **SEMESTER** :III
NAME OF THE STAFF :K.Krishnaveni **TOTAL HOURS** : 60 hrs
CLASS : II BCA

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
July 2022	I	Digital Logic: The Basic Gates – NOT, OR, AND - Universal Logic Gates – NOR, NAND-AND, OR Invert Gates. Number Systems and Codes: Binary Number System –Radix Representation of Numbers- Binary to decimal Conversion- Fixed point Representation-Decimal to binary Conversion-Octal Numbers- Hexadecimal Numbers-The ASCII code – The Excess-3 Code – The Gray code.	12 hrs	Chalk & Talk	<i>K. Krishnaveni</i>
Aug 2022	II	Combinational Logic Circuits: Boolean Laws and Theorems. - Sum of Products Method - Truth table to Karnaugh Map – Pairs, Quads, Octets – Karnaugh Simplification- Don't Care Conditions- Product-of sums Method -Product-of sums Simplifications-Five variable karnaugh Map. Data Processing Circuits: Multiplexers – Demultiplexers-1-of-16 Decoder – BCD-to-decimal Decoders – Seven-segment Decoders – Encoders – Exclusive-OR Gates- Parity Generators and Checkers.	12 hrs	Chalk & Talk	<i>K. Krishnaveni</i>

Aug 2022	III	Arithmetic Circuits: Binary Addition- Binary Subtraction - Flip-Flops: RS Flip Flops-Gated Flip-Flops-Edge triggered RS Flip Flops- Edge triggered D Flip Flops- Edge triggered JK Flip Flops-JK Master Slave Flip Flops.	12 hrs	PPT	
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DEPARTMENT OF COMPUTER APPLICATIONS
LESSON PLAN
2022 ODD SEMESTER

TITLE : Core-Digital Principles & Computer Organization
SUB CODE :17J31 **SEMESTER** :III
NAME OF THE STAFF :G.Alamelu **TOTAL HOURS** : 60 hrs
CLASS : II BCA

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
Sep 2022	IV	Basic Computer Organization and Design: Instruction codes - Computer Registers - Computer Instructions - Timing and Control - Instruction Cycle: Fetch and Decode - Determine the Type of Instruction- Register Reference Instructions. Micro programmed Control: Control memory - Address sequencing- Micro program Example: Computer Configuration- micro instruction format - symbolic microinstructions - Fetch Routine-symbolic micro program - binary micro program.	12 hrs	Google meet	
Oct 2022	V	Central Processing Unit: General Register Organization - Stack Organization - Instruction Formats - Addressing Modes - Data Transfer and Manipulation - Program Control-Reduced Instruction Set Computer (RISC) - Pipeline and Vector Processing: Parallel Processing - Pipelining. Input-output organization: Peripheral devices - Input -Output Interface -Direct Memory Access (DMA)-DMA Controller-DMA Transfer- Memory organization: Memory	12 hrs	Google meet	



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LESSON PLAN

2022 ODD SEMESTER

TITLE : Core- JAVA Programming
SUB CODE :17J32 SEMESTER :III
NAME OF THE STAFF :K.Krishnaveni TOTAL HOURS : 60 hrs
CLASS : II BCA

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
July 2022	I	Overview of Java Language: Introduction-Basic concepts of OOPs - Java Features – Simple Java Program-Java program Structure-Implementing a Java Program-Java Virtual Machine-Command Line Arguments. Constants, Variables & Data types: Introduction-Constants-Variables-Data Types-Declaration of Variables-Giving Values to Variables-Scope of Variables-Symbolic Constants-Type Casting-Getting Values of Variables-Standard Default Values. Operators and Expressions: Introduction-Arithmetic Operators-Relational Operators –Logical Operators –Assignment Operators -Increment and Decrement Operators-Conditional Operator –Bitwise Operators - Special Operators-Arithmetic Expressions-Evaluation of Expressions-Precedence of Arithmetic Operators-Type Conversions in Expressions-Operator precedence and Associativity-Mathematical functions.	12 hrs	Chalk & Talk	
Aug 2022	II	Decision Making and Branching: Introduction-Decision making with if statement-Simple if Statement-The if...Else statement-Nesting of if...Else Statements-The Else if Ladder-Switch statement-The ? : Operator. Decision Making and Looping: Introduction-while Statement-do	12 hrs	Chalk & Talk	


		Statement-for Statement-Jumps in Loops- Labeled Loops. Classes, Objects and Methods: Introduction-Defining a Class-Fields Declaration-Method of Declaration-Creating Objects-Accessing Class Members-Constructors-Method Overloading-Static Members-Nesting of Methods-Inheritance: Extending a Class-Overriding Methods-Final Variables and Methods-Final classes-Finalizer Methods-Abstract Methods and Classes-Visibility control.			
Sep,Oct 2022	III	Arrays, Strings and Vectors: Introduction-One-dimensional Arrays-Creating An Array-Two-dimensional Arrays-Strings-Vectors-Wrapper Classes-Enumerated types. Interfaces: Multiple Inheritances: Introduction-Defining Interfaces-Extending Interfaces-Implementing Interfaces-Accessing Interface Variables. Packages: Putting Classes Together: Introduction-Java API Packages-Using System packages-Naming Conventions-Creating Packages-Accessing a Package-Using a Package-Adding a Class to a Package-Hiding Classes-Static Import.	12 hrs	PPT	P. Gishu
Oct 2022	IV	Multithreaded Programming: Introduction-Creating Threads-Extending the thread Class-Stopping and Blocking a Thread-Life Cycle of a Thread-Using Thread Methods-Thread Exceptions-Thread Priority-Synchronization-Implementing the 'Runnable' Interface-Inter-thread Communication. Managing Errors and Exceptions: Introduction-Types of errors-Exceptions-Syntax of Exception Handling Code-Multiple catch Statements-Using Finally Statement-Throwing our own Exceptions-Using Exceptions for Debugging.	12 hrs	PPT	P. Gishu
		Applet Programming: Introduction-How Applets Differ from Applications-Preparing to			

Oct 2022	V	Write Applets-Building Applet Code-Applet Life Cycle-Creating an Executable Applet-Designing a Web page-Applet tag-Adding Applet to HTML File-Running the Applet-More about Applet tag-Passing parameters to Applets-Aligning the Display-More about HTML tag-Displaying Numerical values-Getting Input from the user- Managing Input/output Files in Java: Byte Stream classes-Character stream classes- Other Stream classes.	12 hrs	Chalk & Talk	<i>P. Pradeep</i>
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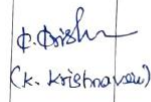
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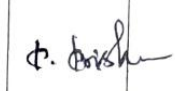
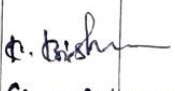
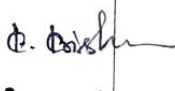
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DEPARTMENT OF COMPUTER APPLICATIONS

**LESSON PLAN
2022 EVEN SEMESTER**

TITLE : Core-Data Structures and Computer Algorithms
SUB CODE :17J41 **SEMESTER** :III
NAME OF THE STAFF :K.Krishnaveni **TOTAL HOURS** : 60 hrs
CLASS : II BCA

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
Dec 2021	I	Introduction And Overview: Introduction-Basic Terminology; Elementary Data Organization-Data Structures-Data Structure Operations - Arrays Records and Pointers: Introduction-Linear Arrays-Representation of Linear Arrays in Memory-Traversing Linear Arrays-Inserting and Deleting-Searching; Linear Search - Multidimensional Arrays - Linked Lists: Introduction-Linked Lists- Header Linked Lists-Two-way Lists.	12 hrs	Chalk & Talk	 (K. Krishnaveni)
Jan 2022	II	Stacks, Queues, Recursion: Introduction - Stacks – Array Representation of Stack- Linked Representation of Stack- Towers of Hanoi - Queues – Linked Representation of Queues -Deques-Priority Queues.	12 hrs	Chalk & Talk	 (K. Krishnaveni)

Feb 2023	III	Trees: Introduction- Binary Trees - Representation of Binary Trees in Memory - Traversing Binary Trees - Binary Search Trees- Graphs and Their Applications: Introduction- Graph Theory Terminology-Sequential Representation of Graphs; Adjacency Matrix; Path Matrix-Operations on Graphs.	12 hrs	Chalk & Talk	 (K. Krishnaveni)
Mar 2023	IV	Introduction: What is an Algorithm? - Algorithm Specification - Performance Analysis - Divide and Conquer: General method - Binary Search - Finding the Maximum and Minimum - Merge Sort - Quick Sort.	12 hrs	PPT	 (K. Krishnaveni)
April 2023	V	The Greedy Method: General Method - Knapsack problem - Job Sequencing with Deadlines - Minimum cost Spanning trees- Prim's Algorithm - Kruskal Algorithm - Optimal Storage on tapes - Optimal merge patterns - Single sources Shortest Paths- Backtracking : The General Method - The 8-Queens Problem.	12 hrs	PPT	 (K. Krishnaveni)


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LESSON PLAN
2022 EVEN SEMESTER

TITLE : Core -Relational Database Management System
CLASS : II BCA SEMESTER :VI
SUB CODE : 21J42 TOTAL HOURS : 60 Hours
NAME OF THE STAFF : G.Alamelu

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
Dec 2022	I	Overview of Database Systems: Managing Data – A Historical Perspective – File Systems Versus a DBMS – Advantages of a DBMS – Describing and Storing Data in a DBMS – Queries in a DBMS – Transaction Management – Structure of a DBMS – People Who Work with Databases. Introduction to Database Design: Database Design and ER Diagrams – Entities, Attributes, and Entity Sets – Relationships and Relationship Sets – Additional Features of ER Model – Conceptual Design with the ER Model.	12 hrs	Chalk & Talk	<i>G. Alamelu</i>

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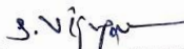
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DEPARTMENT OF COMPUTER APPLICATIONS
LESSON PLAN
2022 EVEN SEMESTER

TITLE : Core -Relational Database Management System
CLASS : II BCA SEMESTER :VI
SUB CODE : 21J42 TOTAL HOURS : 60 Hours
NAME OF THE STAFF : R.Keerthana

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
Jan 2023	II	The Relational Model: Introduction to the Relational Model – Integrity Constraints over Relations – Enforcing Integrity Constraints – Querying Relational Data – Logical Database Design: ER to Relational – Introduction to Views – Destroying / Altering Tables and Views. Relational Algebra and Calculus: Preliminaries – Relational Algebra: Selection and Projection – Set Operations –Renaming – Joins - Division Relational Calculus: Tuple Relational Calculus – Domain Relational Calculus.	12 hrs	Chalk & Talk	 R. Keerthana
Feb 2023	III	SQL Queries, Constraints, Triggers: The Form of a Basic SQL Query - UNION, INTERSECT, and EXCEPT – Nested Queries – Aggregate Operators – Null Values – Complex Integrity Constraints in SQL – Triggers and Active Databases – Designing Active Databases.	12 hrs	Chalk & Talk	 R. Keerthana
	IV	Schema Refinement and Normal Forms: Introduction to Schema Refinement – Functional Dependencies – Reasoning about FD's – Normal Forms – Properties of	12 hrs	PPT	

Mar 2023		Decompositions - Normalization - Schema Refinement in Database Design - Other Kinds of Dependencies			R. Karthi R. Keerthana
April 2023	V	<p align="center">Overview of Transaction management:</p> <p>The ACID Properties - Transactions and Schedules - Concurrent Execution of transactions - Lock Based Concurrency Control - Performance of Locking - Transaction Support in SQL - Introduction to Crash Recovery.</p> <p>Security and Authorization: Introduction to Database Security - Access Control - Discretionary Access Control - Mandatory Access Control - Security for Internet Applications - Additional Issues Related to Security.</p>	12 hrs	PPT	R. Karthi R. Keerthana


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DEPARTMENT OF COMPUTER APPLICATIONS
 LESSON PLAN
 2022 ODD SEMESTER

TITLE : Operating System
 SUB CODE : 21J51
 NAME OF THE STAFF : P. Indhuja

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
July 2022	i	Introduction: What Operating Systems Do-Computer System Organization-Computer System Architecture-Operating System Structure-Operating System Operations- Process Management - Memory management. System Structures: Operating System Services- User Operating System Interface-System Calls-Types of System Calls-System Programs.	12 hrs	Chalk and Talk	P. Indhuja (P. INDHUJA)
Aug 2022	ii	Processes: Process Concept-Process scheduling- Operation on process- Interprocess communication- Examples of IPC Systems-Communication in Client Server Systems- Threads: Overview-Multithreading Models-Thread Libraries-Threading Issues.	12 hrs	Chalk and Talk	P. Indhuja (P. INDHUJA)
Sep 2022	iii	Process Synchronization: Background - The Critical Section Problem- Semaphores- Monitors. CPU Scheduling. Basic concepts- Scheduling criteria- Scheduling algorithms. Thread Scheduling - Multiple Processor Scheduling - Deadlocks: Deadlock Characterization - Methods of Handling Deadlocks - Deadlock Prevention - Deadlock Avoidance.	12 hrs	Chalk and Talk, PPT	P. Indhuja (P. INDHUJA)
Oct 2022	IV	Main Memory: Background-swapping-Contiguous Memory allocation—Segmentation- Paging-Structure of the Page Table Virtual Memory: Background-Demand Paging Copy on Write- Page Replacement- Allocation of Frames.	12 hrs	Chalk and Talk, Assignment	P. Indhuja (P. INDHUJA)

Nov 2022	V	Mass Storage Structure: Overview of Mass Storage Structure-Disk structure- Disk attachment - Disk Scheduling-Disk Management-Swap Space Management. File System Interface: File concepts- Access methods-File System Implementation: FileSystem Structure-Allocation Methods. Free Space Management.	12 hrs	Seminar	P. Indhija (P. INDHIJA)
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LESSON PLAN

2022 ODD SEMESTER

TITLE : Core-Data Communication and Computer Networks
SUB CODE :17J52 SEMESTER :V
NAME OF THE STAFF :K.Krishnaveni TOTAL HOURS : 60 hrs
CLASS : III BCA

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
July 2022	I	Introduction: A Brief History – Application – Computer Networks – Categories of Networks – Standards and Standards Organizations. Network Architectures and OSI Model: Network Architecture – Open System and OSI Model - TCP/IP Architecture – Advantages and Disadvantages of Layer architectures – Distributed system and Client-Server Models.	12 hrs	Chalk & Talk	
Aug 2022	II	Communication Media and Data Transmission: Fourier Analysis – Analog and Digital Data Transmission – Modulation and Demodulation - Transmission media – Wireless Communications – Data Transmission Basics – Transmission Mode – Interfacing - Multiplexing. Error Detection and Correction: Types of Errors – Error Detection – Error Correction.	12 hrs	Chalk & Talk	
Sep 2022	III	Data Link Control and Protocol Concepts: Flow Control – Error Control – Asynchronous Protocols – Synchronous Protocols – High-Level Data Link Control (HDLC). Integrated Services and Routing Protocols: Integrating Services – ISDN Services – ISDN Topology – ISDN Protocols – Broadband ISDN – Asynchronous Transfer Mode (ATM) –	12 hrs	PPT	



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LESSON PLAN

2022 ODD SEMESTER

TITLE : Core-Data Communication and Computer Networks
CLASS : III BCA
SUB CODE : 17J52 SEMESTER : V
NAME OF THE STAFF : G.Alamelu TOTAL HOURS : 60 hrs

Month	Unit	Syllabus	Hours	Teaching Methods	Course Teacher Signature
Sep 2022	IV	Local Area Networks: Types of Networks and Topology - LAN Transmission Equipment - Ethernet: IEEE Standard 802.3 - Token Bus: IEEE Standard 802.4 - Token Ring: IEEE Standard 802.5 - Fiber Distributed Data Interface (FDDI) - Distributed Queue Dual Bus (DQDB) - Ethernet technologies. Network Applications: Client-Server Model - Domain Name System (DNS) - Telnet - File transfer And Remote File Access - Electronic Mail - World Wide Web (WWW).	12 HRS	PPT	
Oct 2022	V	Internetworking: Principles of Internetworking - Routing Principles - Internetwork Protocols (IP) - IP Next Generation. Networking Security: Fundamental Concepts - A Model for Network Security - Security Services and Cryptography - Security Network Using Firewall - Intrusion Detection - Network Security Tools.	12 HRS	Chalk & Talk	

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LESSON PLAN
2022 ODD SEMESTER

TITLE : Core - Dot Net Programming SEMESTER : V
SUB CODE : 17J53 CLASS : III BCA
NAME OF THE STAFF : G.Alamelu TOTAL HOURS : 60 Hours

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
June 2022	I	.Net Framework Overview:.Net Framework-.Net Architecture- namespace. Introduction to VB.NET: Visual Basic .NET - Programming Essentials - Boxing and Unboxing -Control Structures: If Statement - Else If Statement - Select Case. Loop Structures: while Statement - Do Statement - Do until statement - For Statement.	12 hrs	Chalk & Talk	R.R.R
July 2022	II	Arrays and Structure: One Dimensional Array Elements - Two Dimensional Arrays - Structures. Function and Procedures: Functions - Sub Procedure - OOP Concepts: Class and Object - constructor - Inheritance. Exception Handling: Exception Handling.	12 hrs	Chalk & Talk	R.R.R
Aug 2022	III	Textbox, Button, Label and LinkLabel: Label, Button and LinkLabel,-TextBox. ListBox, Scroll Bars, Checkbox and Radio Button: The List Box Control - Scroll Bar - Checkbox and Radio Button. Picture Box, Timer Box, and Menu Strip: Picture Box, Time control - Menu strip - Combo Box.. Month Calendar, Date Time Picker, Checked List Box: Date Time Picker - Month	12 hrs	PPT	R.R.R

		Calendar – Checked List Box. Delegates and Events: Delegates – Events – Different Kind of Execution.			
Sep 2022	IV	Creating Our Own Class Library: Creation of class Library and using them in an application – Authentication Form – Student Mark. OOP Concepts in Library: Constructor – Circle – triangle – Inheritance in Employee record – Sales and Servicing. Excel Application in VB.NET: Excel in VB.NET – Mark sheet. Database in VB.NET: Creating Database – Navigation of Records – Elementary Operation of Database. Report Generation: Crystal Report – Field Explorer and Database Expert. Graphics in VB.NET: Displaying a String – Displaying a Line – Displaying Lines – Displaying a Square – Displaying a Solid Rectangle – Displaying an image.	12 hrs	PPT	R.P.S
Oct 22	V	Working with ASP .NET Server Controls: Introduction to Server Controls- A Closer Look at ASP.NET Server Controls- Defining Controls in Your Pages- Common Properties for All Controls- Types of Controls- Standard Controls- HTML Controls- Data Controls- Validation Controls- Navigation Controls- Login Controls- Ajax Extensions- WebParts- Dynamic Data. User Controls- Introduction to User Controls: Creating User Controls-Adding User Controls to a Content Page or Master Page- Sitewide Registration of User Controls-User Control Caveats-Adding Logic to Your User Controls: Creating Your Own Data Types for Properties-Implementing View State Properties-View State Considerations.	12 hrs	Chalk & Talk	R.P.S

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DEPARTMENT OF COMPUTER APPLICATIONS
LESSON PLAN
2022 ODD SEMESTER

TITLE : Computer Graphics SEMESTER : V
SUB CODE : 17JE5A CLASS : III BCA
NAME OF THE STAFF : G.Alamclu TOTAL HOURS : 60Hours

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
June 2022	I	A Survey of computer graphics: Computer - Aided Design - Presentation Graphics - Computer art - Entertainment - Education and Training - Visualization - Image Processing - Graphical user Interfaces. Overview of Graphics system: Video display devices- Refresh Cathode-Ray Tubes, Raster scan Displays, Random-Scan Displays, Color CRT Monitors, Direct-View Storage Tubes, 3D Viewing Devices, Stereoscopic Reality Systems- Raster Scan systems-Random scan system -I/P devices-Hard copy devices-Graphics software.	12 hrs	Chalk & Talk	
July 2022	II	Output Primitives: Points and lines-Line drawing algorithms: DDA Algorithms, Bresenham's Line Algorithm-Loading the frame buffer-Circle generating algorithms- Other curves-Pixel Addressing-Filled area primitives-Fill-Area Functions-Cell Array- Character Generation.	12 hrs	Chalk & Talk	
Aug 2022	III	Attributes of Output Primitives: Line attributes: Line Type, Line Width, Line Color-Curve attribute-Color and grayscale levels-Area fill attributes-Character attributes-Bundled	12 hrs	PPT	

		attributes-Inquiry functions-Antialising: Antialising Area Boundaries.			
Sep 2022	IV	Two-Dimensional Geometric Transformations: Basic Transformations: Translation-Rotation-Scaling-Matrix representations and homogeneous coordinates-Composite transformations: Translations-Rotations-Scaling-General pivot point Rotation-General Scaling Directions-Concatenation Properties-General Composite Transformations and Computational Efficiency-Other Transformations: Reflection-Shear- Three Dimensional Concepts : Three-Dimensional display methods: parallel project – perspective projection – depth cueing – visible Line and surface – Identification. Exploded and cutaway views – Three-Dimensional and stereoscopic-views- Three-Dimensional graphics Packages.	12 hrs	PPT	
Oct 2022	V	Two –Dimensional Viewing: The Viewing Pipeline-Viewing Coordinate reference frame-Window-to-View port Coordinate transformation-Two-Dimensional Viewing functions-Clipping Operations-Point clipping-Line clipping: Cohen-Sutherland Line Clipping, Liang- Barsky Line Clipping, Nicholle-Lee-Nicholl Line Clipping- Line Clipping using NonRectangular – Clip Windows – Splitting Concave Polygon -Polygon Clipping: Sutherland-Hodgeman Polygon Clipping – Weiler Atherton Polygon Clipping - Other Polygon Clipping Algorithms-Curve Clipping-Text clipping –Exterior Clipping.	12 hrs	Chalk & Talk	

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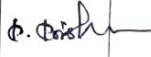
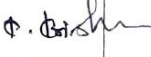
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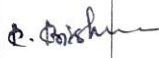
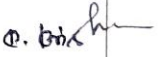
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LESSON PLAN
2022 EVEN SEMESTER

TITLE :Core- Software Engineering
SUB CODE :17J61 SEMESTER :VI
NAME OF THE STAFF :K.Krishnaveni TOTAL HOURS : 60 hrs
CLASS : III BCA

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
Dec 2022	I	<p>Software and Software Engineering: The nature of Software – Software Engineering – The Software Process- Process Models: A Generic Process Model – Process Assessment and Improvement– Prescriptive Process Model – Specialized process model – The Unified Process – Personal and Team Process Model – Process Technology – Product and Process - Agile Development: What is Agility? – Agility and the Cost of Change – What is an Agility process? .</p>	12 hrs	Chalk & Talk	 (K. Krishnaveni)
Jan 2023	II	<p>Understanding Requirements: Requirements Engineering-Establishing the Groundwork-Eliciting requirements- Developing use case - Building the Requirements Model- Negotiating Requirements -Validating Requirements – Requirements Modeling: Requirements analysis– Data Modeling Concepts.</p>	12 hrs	Chalk & Talk	 (K. Krishnaveni)

Feb 2023	III	<p>Design Concepts: Design concepts- The Design model-Architectural design- Component Level Design: What is Component? - Designing Class-Based Components-Conducting Components-level Design - Components-level Design for webApps-User interface Analysis and design.</p>	12 hrs	Chalk & Talk	 (K. Krishnaveni)
Mar 2023	IV	<p>Review Techniques: Informal Reviews - Formal Technical Reviews - Software Quality Assurance: SQA Tasks, Goals and Metrics- -Software Reliability - The ISO 9000 Quality Standards-The SQA Plan- Software Testing Strategies: A Strategic Approach to Software Testing-Test Strategies for conventional Software - Validation Testing - System Testing-The Art of Debugging- Estimation for Software Projects: Software Project Estimation- Decomposition Techniques. Software Sizing-Problem Based Estimation-An Example of LOC Based Estimation-An Example of FP Based Estimation-Process Based Estimation-An Example of Process Based Estimation-Estimation with Use Cases-An Example of Use Case Based Estimation-Reconciling Estimates-Empirical Estimation Models: The Structure of Estimation Models-The COCOMO II Model-The Software Equation.</p>	12 hrs	PPT	 (K. Krishnaveni)

April 2023	V	Software Configuration Management: SCM process – The SCM Repository – The SCM Process – Risk Management: Software Risk – Risk Identification – Risk Projection – Risk Refinement – Risk Mitigation, Monitoring, and management - The RMMM Plan. Project Scheduling: Project Scheduling: Basic Principles- The Relationship between People and Effort- Effort Distribution.	12 hrs	PPT	
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LESSON PLAN
2022 EVEN SEMESTER

TITLE : Core-Web Technology Semester : VI
SUB CODE : 17J62 Class:III BCA
NAME OF THE STAFF : G.Alamelu Total Hours : 60 Hours

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
Dec 2022	I	Introduction to HTML5: Introduction-Editing HTML5-First HTML5 Example-W3C HTML5 Validation Service-Headings-Linking - Images: Alt Attribute- Void Elements - Using Images as Hyperlinks -Special Characters and Horizontal Rules-Lists-Tables-Forms-Internal Linking-Meta Element-New HTML5 Form input Types.	12 hrs	Chalk & Talk	G. Alamelu

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LESSON PLAN
2022 EVEN SEMESTER

TITLE : Core-Web Technology
SUB CODE : 17J62
NAME OF THE STAFF : R.Keerthana

Semester : VI
Class:III BCA
Total Hours : 60 Hours

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
Jan 2023	II	Introduction to Cascading Style SheetsTM(CSS): Introduction -Inline Styles-Embedded Style Sheets-Conflicting Styles-Linking External Style Sheets-Positioning Elements: Absolute Positioning, Z-index-Positioning Elements: Relative Positioning, span-Backgrounds-Text Shadows-Rounded Corners-Color-Box Shadows-Linear Gradients; Introducing Vendor Prefixes-Radial Gradients - (Optional: WebKit Only)Text Stroke-Multiple Background Images-(Optional: WebKit Only)Reflections-Image Borders-Animation; Selectors-Transitions and Transformations-Downloading Web Fonts and the @font-face Rule-Flexible Box Layout Module and : nth-child Selectors-Multicolumn Layout.	12 hrs	Chalk & Talk	 R. Keerthana

Feb 2023	III	JavaScript: Introduction to Scripting: Introduction-Your First Script: Displaying a Line of Text with JavaScript in a Web Page-Memory Concepts- JavaScript: Function : Function Definitions-JavaScript Global Functions- JavaScript: Arrays: Arrays- Declaring and Allocating Arrays- Passing Arrays to Functions- Multidimensional Arrays - JavaScript: Objects: String Objects-Date Object-Boolean and Number Objects-Document Object-Using JSON to Represent Objects.	12 hrs	Chalk & Talk	R. Keerthana
Mar 2023	IV	Database: SQL, MySQL, LINQ and Java DB : Introduction - Relational Databases - Relational Database Overview: A books Database - SQL - Basic SELECT Query - WHERE Clause - ORDER BY Clause - Merging Data from Multiple Tables: INNER JOIN - INSERT Statement -UPDATE Statement - DELETE Statement - MySQL - Instructions for Setting Up a MySQL User Account - Creating Databases in MySQL.	12 hrs	PPT	R. Keerthana
April 2023	V	PHP: Introduction-Simple PHP Program- Converting Between Data Types-Arithmetic Operators-Initializing and Manipulating Arrays-String Comparisons-String Processing with Regular Expressions-Form Processing and Business Logic-Reading from a Database-Using Cookies.	12 hrs	PPT	R. Keerthana


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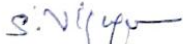
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2022 EVEN SEMESTER

TITLE : Data Mining
SUB CODE : 17JE6A
NAME OF THE STAFF : P. Indhuja

Month	Unit	Syllabus	Hours	Teaching Methods	Signature
Dec 2022 & Jan 2023	i	Data Mining: Introduction - What is Data Mining? - Data Mining Functionalities -KDD vs Data Mining - Other related Areas- DM Technique- Other mining problems - Issues and challenges in DM - DM applications areas- DM Applications case studies. Association Rules: Introduction - what is an Association Rule? - Methods to Discover Association Rules- Apriori Algorithm.	12 hrs	Chalk and Talk	P. Indhuja (P. INDHUJA)
Jan 2023	ii	Data Warehousing: Introduction - Data warehouse Architecture - Dimensional Modeling - categories of Hierarchies - Aggregate Function - summarisability - Fact Dimension Relationship - OLAP operations - Lattice of Cuboids - OLAP Server - ROLAP - MOLAP - Data Marting - ETL - Data Cleaning - ETL vs ELT.	12 hrs	Chalk & Talk, Assignment	P. Indhuja (P. INDHUJA)
Feb 2022	iii	Decision Trees: Introduction-what is a Decision Tree?- Tree Construction Principle- Best Split - Splitting Indices - Splitting criteria - Decision Tree Construction algorithms - CART - ID3 - C4.5 - CHAID - Pruning Technique. Genetic Algorithm: Introduction - Basic Steps of	12 hrs	Chalk & Talk, PPT	P. Indhuja (P. INDHUJA)

		GA – Selection – Crossover – Mutation – Data Mining Using GA.			
Mar 2023	IV	Clustering Techniques: Introduction – Clustering Paradigms – Partitioning Algorithms – K-Medoid Algorithm – CLARA – CLARANS – Hierarchical Clustering – DBSCAN – BIRCH – CURE. Other Techniques: Introduction – What is a Neural Network? - Learning in NN – Unsupervised Learning – Support Vector machine.	12 hrs	Chalk & Talk, Assignment	P. Indhuja (P. INDHUJA)
Apr 2023	V	Web Mining: Introduction – Web Mining – Web Content Mining – Web Structure Mining – Web Usage Mining – Text Mining – Unstructured Text – Text Clustering. Temporal and Spatial Data Mining: Introduction – What is Temporal Data Mining? – Temporal Association Rules – Sequence Mining – Spatial MINING – Spatial Mining Tasks – Spatial Clustering – Spatial Trends.	12 hrs	Seminar	P. Indhuja (P. INDHUJA)


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