

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 SCIENCE**

(UG –Odd & Even Semester)



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
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LESSON PLAN
2022-2023


Class : I B.Sc., Computer Science



Semester : I

Sub. Code : 22OUCS11

Title of the Paper : Programming in C

Total Hours : 60 Hours

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Aug' 22	I	Overview of C: History of C – Importance of C – Sample Programs – Basic Structure of C Programs– Executing a 'C' Program. 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.	I B.Sc(CS) 'A'	12 Hrs	Chalk & Talk	 V. Jayavani

Sep' 22	II	<p>Managing Input and Output Operations: Introduction - Reading a Character - Writing a Character - Formatted Input - Formatted Output.</p> <p>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 - The Switch Statement - The ?: Operator - The Goto Statement.</p> <p>Decision Making and Looping: Introduction - The while Statement - The do Statement - The for Statement - Jumps in Loops.</p>	I B.Sc(CS) 'A'	12 Hrs	Chalk & Talk	 V. Jayavani
Sep' 22	III	<p>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.</p> <p>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.</p>	I B.Sc(CS) 'A'	12 Hrs	Chalk & Talk	 V. Jayavani
Oct' 22	IV	<p>User-Defined Functions: Introduction - Need for User-Defined Functions - A Multi-Function Program - Elements of User-Defined</p>				

	<p>Functions - Returning Pointers - Pointers to Functions - Pointers and Structures. 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>				
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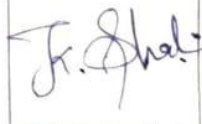
LESSON PLAN
2022-2023

Sub. Code : 22OUCSID1

Semester: I

Title of the Paper : Computing Fundamentals

Total Hours : 30

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Jun 22	I	The System Unit :What is the System Unit? – Computer Basics – The Motherboard – Microprocessors – Math Coprocessors – The System Clock – Architecture (System Data Bus) - Random Access Memory (RAM) – Read Only Memory (ROM).	I Year	5 Hrs	Chalk and Talk	 (Ms.K.Shalini)
July 22	II	Input Devices :What do Input Devices do? – The Keyboard – Pointing Devices – Touch-Sensitive Devices – Optical Scanning Devices – How Optical Scanning Works – Magnetic Scanning – Digital Sound Processing – Voice Recognition Devices – Specialized Input Devices.	I Year	5 Hrs	Chalk and Talk	 (Ms.K.Shalini)
Aug 22	III	Secondary Storage: Types of Secondary Storage Devices – Magnetic Disk (Floppy and Hard Disk) – How Data is Stored on a Magnetic Disk – Floppy Disks –	I Year	5 Hrs	Chalk and Talk	

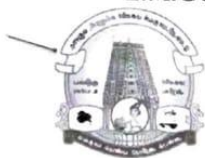
		Hard Disks – Optical Disks – Magnetic Tape Cartridges.				<i>K. Shalini</i> (Ms.K.Shalini)
Sep 22	IV	Output Devices: Monitors – Printers – Plotters – Voice Output. System Software Utilities : What is System Software? – System Start-up – Basic Input/Output System (BIOS) – The Operating System – The User Interface – The Operating Environment – The Development of Microcomputer Operating Systems – System Utility Programs.	I Year	5 Hrs	Chalk and Talk	<i>K. Shalini</i> (Ms.K.Shalini)
Oct 22	V	Word Processors : What is a Word Processors? – Basic Functions – Advanced Features – Word Processors – Special- Purpose Utilities.	I Year	5 Hrs	Chalk and Talk	<i>K. Shalini</i> (Ms.K.Shalini)

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Semester II



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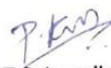
LESSON PLAN
2022-2023



Sub. Code : 21S21



Semester: II

Title of the Paper: Object Oriented Programming with C++

Total Hours : 60 Hrs


Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Dec 22	I	Principles of Object-Oriented Programming : Basic concepts of Object-Oriented Programming - Benefits of OOP - Object-Oriented Languages - Application of OOP. Beginning with C++ : What is C++? - Application of C++ - A Simple C++ Program - More C++ Statements - An Example With Class - Structure of C++ Program - Creating the Source file - Compiling and Linking. 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-Expressions and Their Types-Special Assignment	I Year	12hrs	Chalk & Talk	 (P.Ruby stella Mary)

		Expressions –Implicit Conversions–Operator Overloading –Operator Precedence–Control Structures.				
Jan 23	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 – C Structures Revisited–Specifying a Class – Defining Member Functions – A C++ Program with Class – Making an Outside Function Inline – Nesting of Member Functions – 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 – Const Member Functions – Pointers to Members – Local Classes.	I Year	12 Hrs	Chalk & Talk	 (P Ruby stella Mary)
Feb 23	III	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	I Year	12 Hrs	Chalk & Talk	 (P Ruby stella Mary)

		Type Conversion : Introduction - Defining Operator Overloading - Overloading Unary Operators - Overloading Binary Operators - Manipulation of Strings using Operators - Rules for Overloading Operators				
Feb 23	IV	Inheritance : Extending Classes : Introduction - Defining Derived Classes - Single Inheritance - Making a Private Member Inheritable - Multilevel Inheritance - Hierarchical Inheritance - Hybrid Inheritance - Virtual Base Classes - Abstract Classes. Pointers , Virtual Functions and Polymorphism : Introduction - Pointers - Pointers to Objects - this Pointer - Pointers to Derived Classes- Virtual functions - Pure Virtual Functions - Virtual Constructors and Destructors.	I Year	12 Hrs	Chalk & Talk	 (P. Ruby stella Mary)
Mar 23	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	I Year	12 Hrs	Chalk & Talk	 (P. Ruby stella Mary)

		File Operations - Command-line Arguments				
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LESSON PLAN




2022-2023



Sub. Code : 22OUCSID2

Semester: II

Title of the Paper : Inter Disciplinary Course

Total Hours : 30

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Jan 23	I	Introduction to Internet: Introduction to Internet – History of Internet- How Internet Works?– HTML(Hypertext Markup Languages) – Internet Services and Governance.	I Year	5 Hrs	Chalk and Talk	 (Mrs. P.Krishna Geetha)
Feb 23	II	Internet Technology and Protocols: Understanding Protocols – TCP/IP Protocols- Introduction to Networking- Types of Networking –Local Area Network- Wide Area Networks or WAN -Types of Wide Area Networks.	I Year	5 Hrs	Chalk and Talk	 (Mrs. P.Krishna Geetha)
Feb 23	III	World Wide Web: Introduction to World Wide Web- Evolution of World Wide Web – Web Browsers - Popular Web Browsers – Web Servers –Hypertext Transfer Protocol(HTTP) – Search Engine Categories	I Year	6 Hrs	Chalk and Talk	 (Mrs. P.Krishna Geetha)

Mar 23	IV	Browsers: What is a Browser? – Basic Features of Web Browsers – Working of Internet Explorer – Toolbar Buttons – Working on the Web using the Browsers.	1 Year	7 Hrs	Chalk and Talk	 (Mrs. P. Krishna Geetha)
April	V	Working with e-mail: e-mail –opening of e-mail account – Parts of e-mail text –Working with Messages – Reading a Message – Replying to a Message – Forwarding a Message – Deleting a Message – E-mail Clients.	1 Year	7 Hrs	Chalk and Talk	 (Mrs. P. Krishna Geetha)



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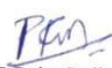
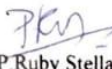
LESSON PLAN
2022-2023




Sub. Code : 21S31

Title of the Paper: Digital Principles and Computer Organization

Semester : III

Total Hours : 60 Hrs

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July 22	I	<p>Digital Logic: The Basic Gates - NOT, OR, AND – Universal Gates-NOR, NAND.</p> <p>Combinational logic Circuits: Boolean Laws and Theorem – Sum-of-Product Method – Truth Table to Karnaugh Map – Pairs, Quads and Octets – Karnaugh Simplifications – Don't care Conditions. Data Processing Circuits: Multiplexers – Demultiplexer – 1-of-16 Decoder – Encoders.</p>	II B.Sc(CS) 'A' And 'B'	12hrs	Chalk And Talk	 (P.Ruby Stella Mary)
Aug 22	II	<p>Number Systems and Codes: Binary Number System – Binary-to-decimal Conversion – Decimal-to-binary Conversion – Octal Numbers – Hexadecimal Numbers- The ASCII Code – The Excess-3 Code – The Gray Code. Arithmetic Circuits: Binary Addition – Binary Subtraction – 2's Complement Representation – 2's Complement Arithmetic. Flip-Flops: RS FLIP-FLOPs – Edge-triggered D FLIP-FLOPs – Edge-triggered JK FLIP-FLOPs – JK Master Slave FLIP-FLOPs. Counters: Asynchronous Counters – Synchronous Counters.</p>	II B.Sc(CS) 'A' And 'B'	12hrs	Chalk And Talk	 (P.Ruby Stella Mary)

Sep22	III	Basic Computer Organization and Design: Instruction Codes – Computer Registers – Computer Instructions – Instruction Cycle – Input-Output Interrupt. Programming the Basic Computer: Assembly Language – The Assembler – Subroutines.	II B.Sc.'A' and 'B'	12hrs	Chalk And Talk	 (P. Ruby Stella Mary)
Sep 22	IV	Central Processing Unit : Introduction – General Register Organization – Stack Organization – Instruction Formats – Addressing Modes – Data Transfer and Manipulation – Reduced Instruction Set Computer(RISC). Pipeline and Vector Processing: Parallel Processing – Pipelining – Instruction Pipelining.	II B.Sc.(CS) 'A' And 'B'	12hrs	Chalk And Talk	 (P. Ruby Stella Mary)
Oct22	V	Input-Output Organization: Peripheral Device – Input- Output Interface – Direct Memory Access (DMA) – Memory Organization: Memory Hierarchy - Main Memory – Auxiliary Memory – Associative Memory – Cache Memory – Virtual Memory.	II B.Sc.(CS) 'A' And 'B'	12hrs	Chalk And Talk	 (P. Ruby Stella Mary)


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LESSON PLAN
2022-2023

Class : II B.Sc(CS) 'A' And 'B'
Sub. Code : 21S32
Title of the Paper : JAVA Programming
Total Hours : 60 Hours

Semester : III

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July 2022	I	Java Evolution: Java history - Java Features - Java Environment. Over view of Java Language: Simple Java Program - Java program Structure - Java Tokens - Installing and Configuring Java - Implementing a Java program - Java Virtual Machine. Constants, Variables and Data Types: Introduction - Constants - Variables - Data types - Declaration of variables- Giving Values to Variables- Scope of Variables- Symbolic Constants- Type Casting.	12 Hrs	Chalk & Talk	 (Mrs.N.Kavitha)
August 2022	II	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 Expression - Operator precedence and Associativity. Decision Making and Branching: Introduction - Decision	12 Hrs	Chalk & Talk	 (Mrs.N.Kavitha)

		<p>Making with If Statement - Simple If Statement - The If...Else Statement - Nesting of If...Else Statements - Switch Statement - The? Operator. Decision Making and Looping: Introduction - While Statement - do Statement - for Statement - Jumps in Loops - return Statement.</p>			
August & September 2022	III	<p>Classes, Objects and Methods: Introduction - Defining a Class - Methods 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. Arrays, Strings and Vectors: Introduction - One-dimensional Arrays - Creating an Array - Two-dimensional Arrays - Strings - Vectors - Wrapper Classes - Enumerated Types. Interfaces: Multiple inheritance: Introduction - Defining Interfaces - Extending Interfaces - Implementing Interfaces - Accessing Interface Variables.</p>	12 Hrs	Chalk & Talk	<p> (Mrs.N.Kavitha)</p>
September & October 2022	IV	<p>Packages: Putting Classes Together: Introduction - Java API Packages - Using System packages - Naming conventions - Creating</p>	12 Hrs	Chalk & Talk	<p>(Mrs.N.Kavitha)</p>

	<p>Packages-Accessing a package-Using a Package-Adding a Class to a Package-Hiding Classes-Static Import.</p> <p>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.</p>			
October 2022	<p>Managing Errors and Exceptions: Introduction-Types of Errors-Exceptions-Syntax of Exception Handling Code-Multiple catch Statements-Using Finally Statement-Throwing our own Exceptions- Improved Exception Handling in Java SE 7-Using Exceptions for Debugging.</p> <p>Applet Programming: Introduction-How Applets Differ from Applications-Preparing to 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-Event Handling.</p> <p>Managing Input/Output Files in Java: Byte Stream</p>	12 Hrs	Chalk & Talk	 (Mrs.N.Kavitha)

		classes-Character Classes- Other classes.	Stream Stream			
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LESSON PLAN

2022-2023



Class : II B.Sc., Computer Science


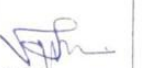
Semester : IV


Sub. Code : 21S41

Title of the Paper: Data Structures

Total Hours : 60 Hours

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Dec' 22	I	Introduction and Overview: Introduction – Basic Terminology; Elementary Data Organization – Data Structures – Data Structure Operations – Algorithms: Complexity, Time – Space Tradeoff. Preliminaries: Algorithmic Notation– Complexity of Algorithms. Arrays, Records and Pointers: Linear Arrays – Traversing Linear Arrays – Inserting and Deleting - Sorting: Bubble Sort – Searching: Linear Search – Binary Search.	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk & Talk	 V. Jayavani
Jan' 23	II	Linked Lists: Introduction – Linked Lists– Representation of Linked Lists in Memory– Traversing a Linked List–Searching a Linked List–Memory Allocation; Garbage Collection–Insertion into a Linked List–Deletion from a Linked List–	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk & Talk	 V. Jayavani

		<p>Header Linked Lists- Stacks, Queues, Recursion: Introduction-Stacks - Array Representations of Stacks-Linked Representations of Stacks-Arithmetic Expressions; Polish Notation-Quick sort, an Applications of Stacks- Recursion- Queues - Linked representation of Queues- Deques.</p>				
Feb' 23	III	<p>Trees: Introduction- Binary Trees- Representing Binary Trees in Memory- Traversing Binary Trees - Binary Search Trees- Searching and Inserting in Binary Search Trees - Deleting in Binary Search Tree - AVL Search Trees- Insertion in an AVL Search Tree- Deletion in an AVL Search Tree- B Trees - Searching, Insertion and Deletion in a B-tree - Heap; Heapsort.</p>	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk & Talk	 V. Jayavani
Mar' 23	IV	<p>Graphs and Their Applications: Introduction - Graph Theory Terminology- Sequential Representation of Graphs: Adjacency Matrix; Path Matrix - Warshall's Algorithm; Shortest Paths - Linked Representation of a Graph- Operations on Graphs- Traversing a Graph-Spanning Tree.</p>	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk & Talk	 V. Jayavani

Apr '23	V	Sorting and Searching: Introduction-Sorting- Insertion Sort-Selection Sort-Merging - Merge- Sort -Radix Sort- Searching and Data Modification-Hashing - line Arguments.	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk & Talk	 V. Jayavani
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LESSON PLAN
2022-2023 (Even)



Sub. Code :21S42

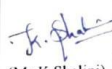
Title of the Paper : RDBMS

Semester: IV

Total Hours : 60

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Dec 22	I	Introduction to Database Management System (DBMS): Introduction – Characteristics of Data in Database – Database Management System – Why DBMS – Types of Database Management Systems. Introduction to Relational Database Management System (RDBMS): Introduction – RDBMS Terminology – The Relational Data Structure – Relational Data Integrity – Relational Data Manipulation. Database Architecture and Data Modeling: Introduction – Conceptual, Physical and Logical Database Models – Database Design – Design Constrains – Functional Dependencies	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)
Jan 23	II	Entity-Relationship model (E-R) Modeling: Introduction – E-R Model, Components of an E-R Model – E-R Modeling Symbols. Data Normalization: Introduction – First Normal Form(1NF) – Second Normal Form(2NF) – Third	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)

		Normal Form(3NF) – Boyce-Codd Normal Form(BCNF) – Forth Normal Form(4NF) – Fifth Normal Form(5NF) – Domain-key Normal Form(DKNF) – Denormalization. Relational Algebra and Relational Calculus: Relational Algebra – Relational Calculus.				
Feb 23	III	Introduction to Structured Query Language (SQL): Introduction – Characteristics of SQL – Advantages of SQL – SQL Data Types and Literals – Types of SQL commands – SQL Operators – Arithmetic Operators – Comparison Operators – Logical Operators – Set Operators. Tables, Views and Indexes: Tables – Views – Indexes – Queries and Subqueries: Queries – Subqueries – Aggregate Functions: Introduction–General Rules – COUNT () and COUNT (*) – SUM () – AVG () – MAX () and MIN ().	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)
Mar 23	IV	Insert, Update and Delete Operations: Introduction – INSERT statement – Bulk insert of Data – UPDATE Statement – Delete Statement – Cursor: Introduction – Cursor Operations – Cursor Positions – Joins and Unions: Joins – Unions – Triggers: Introduction – What is Trigger? – Types of Triggers – Trigger Syntax – Combining Trigger Types – Setting Inserted Values – Disabling and Enabling	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)

		Triggers – Advantages and Limitations of Triggers.				
Apr 23	V	Database Security: Introduction – Database Environment – Data Security Risks – Dimensions of Database security – Data Security Requirements – Protecting the Data within the Database – Granting and Revoking Privileges and Roles – Data Integrity: Introduction – Types of Integrity Constrains – Transaction Management and Concurrency Control: Introduction – Transactions, Transaction Properties – Transaction States – Concurrency Control – Serializability, Recoverability – Concurrency Control Schemes – The COMMIT Command – The ROLLBACK Command – The SAVEPOINT Command.	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)


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Semester V

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LESSON PLAN
2022-2023

Sub. Code : 17S51

Title of the Paper: **Christy Rosalin**

Semester : V

Total Hours : 60 Hrs

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
August 21	I	Introduction: What Operating Systems Do-Computer System Organization-Computer System Architecture-Operating System Structure-Operating System Operations-Distributed Systems-Open Source Operating Systems. Operating System Structures: Operating System Services- User Operating System Interface-System Calls-Types of System Calls-System Programs-Virtual Machines.	III B.Sc(CS) 'A' And 'B'	12hrs	Chalk & Talk	<i>Christy</i> (Ms.Christy Rosalin)
Sep 21	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-	III B.Sc(CS) 'A' And 'B'	12hrs	Chalk & Talk	<i>Christy</i> (Ms.Christy Rosalin)

		Threading Issues-Operating System Examples.				
Oct 21	III	CPU Scheduling: Basic concepts- Scheduling criteria- Scheduling algorithms. Thread Scheduling - Multiple Processor Scheduling. Process Synchronization: Background - The Critical Section Problem-Peterson's Solution-Synchronization Hardware - Semaphores- Classic Problems-Monitors- Synchronization Examples- Deadlocks.	III B.Sc 'A' and 'B'	12hrs	Chalk & Talk	Christy (Ms.Christy Rosalin)
Nov 21	IV	Main Memory: Background-swapping-Contiguous Memory allocation-Paging-Structure of the Page Table-Segmentation. Virtual memory: Background-Demand Paging-Copy on Write-Page Replacement-Allocation of Frames-Thrashing.	III B.Sc(CS) 'A' And 'B'	12hrs	Chalk & Talk	Christy (Ms.Christy Rosalin)


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LESSON PLAN
2022-2023

Sub. Code :17S51

Semester: V

Title of the Paper : Operating System

Total Hours : 60

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Oct 22	V	File System: File concepts-Access methods- File System Implementation: File Structure- Allocation Methods-Free Space Management. Mass-Storage Structure: Overview of Mass Storage Structure-Disk structure-Disk Scheduling-Disk Management-Swap Space Management. The Linux System: Design Principles-Kernel Modules - Process Management - Scheduling-Interprocess communication - Network Structure-Security.	III B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)


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LESSON PLAN
2022-2023

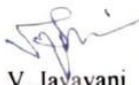

Class : III B.Sc., Computer Science



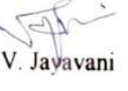
Semester : V

Sub. Code : 17S52

Title of the Paper: Software Engineering

Total Hours : 75 Hours

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Jul' 22	I	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 Models – Specialized Process Models – The Unified Process – Personal and Team Process Models. Agile Development: What is Agility? – Agility and the Cost of Change – What is an Agile Process?	III B.Sc(CS) 'A'	15 Hrs	Chalk & Talk	 V. Jayavani
Aug' 22	II	Understanding Requirements: Requirements Engineering– Establishing the Groundwork – Eliciting Requirements – Building Requirements Model. Requirements Modeling: Scenarios, Information, and Analysis Classes: Requirement Analysis – Scenario-Based Modeling – UML Models That Supplement The Use Case – Data Modeling Concepts – Class-Based Modeling.	III B.Sc(CS) 'A' And 'B'	15 Hrs	Chalk & Talk	 V. Jayavani

Aug '22 & Sep' 22	III	Design Concepts: Design Concepts – The Design Model. Architectural Design: Software Architecture – Architectural Design. Component-Level Design: What Is a Component? – Designing Class-Based Components. User Interface Design: User Interface Analysis and Design – Interface Design Steps.	III B.Sc(CS) 'A'	15 Hrs	Chalk & Talk	 V. Jayavani
Sep' 22 & Oct' 22	IV	Software Quality Assurance: Elements of Software Quality Assurance – Software Reliability. Software Testing Strategies: A Strategies Approach to Software Testing – Test Strategies for Conventional Software – Validation Testing – System Testing – The Art of Debugging. Test Conventional Applications: Software Testing Fundamentals – White-Box Testing – Basis Path Testing – Control Structure Testing – Black-Box Testing.	III B.Sc(CS) 'A' And 'B'	15 Hrs	Chalk & Talk	 V. Jayavani
Oct' 22	V	Software Configuration Management: Software Configuration Management – The SCM Repository – The SCM Process. Project Scheduling: Project Scheduling – Scheduling. Risk Management: Risk Identification – Risk Projection – Risk Refinement. Maintenance And Reengineering: Software Maintenance – Business Process Reengineering – Software Reengineering – Restructuring.	III B.Sc(CS) 'A'	15 Hrs	Chalk & Talk	 V. Jayavani



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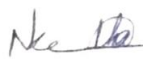
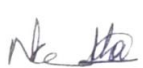
LESSON PLAN
2022-2023

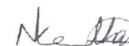
Class : III B.Sc(CS) 'A' And 'B'
Sub. Code : 17S53
Title of the Paper : RDBMS
Total Hours : 75 Hours


Semester : V

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July 2022	I	Introduction to Database Management System (DBMS): Introduction, Why a Database, Characteristics of Data in Database, Database Management System, Why DBMS, Types of Database Management Systems. Introduction to Relational Database Management System (DBMS): Introduction, RDBMS Terminology, The relational Data Structure, Relational Data Integrity, Relational Data Manipulation. Database Architecture and Data Modeling: Introduction, Conceptual, Physical and Logical Database Models, Database Design, Design Constrains, Functional Dependencies..	15 Hrs	Chalk & Talk	 (Mrs.N.Kavitha)

<p>August 2022</p>	<p>II</p>	<p>Entity-Relationship model (E-R) Modeling: Introduction, E-R Model, Components of an E-R Model, E-R Conventions, Relationship, E-R Diagram (ERDs), E-R Modeling Symbols. Data Normalization: Introduction, First Normal Form(1NF), Second Normal Form(2NF), Third Normal Form(3NF), Boyce-Codd Normal Form(BCNF), Forth Normal Form(4NF), Fifth Normal Form(5NF), Domain-key Normal Form(DKNF), Denormalization. Structured Query Language (SQL): Introduction, Characteristics of SQL, Advantages of SQL, SQL in Action, SQL Data type and Literals, Types of SQL commands, SQL Operators, Arithmetic Operators, Comparison Operators, Logical Operators, Set Operators.</p>	<p>15 Hrs</p>	<p>Chalk & Talk</p>	<p> (Mrs. N. Kavitha)</p>
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<p align="center">August & September 2022</p>	<p align="center">III</p>	<p>Relational Algebra and Relational Calculus: Relational Algebra, Relational Calculus. Tables, Views and Indexes: Tables, Views, Indexes. Aggregate Functions: Introduction, General Rules, COUNT() and COUNT(*) , SUM(), AVG(), MAX(), AND MIN(). Insert, Update and Delete Operations: Introduction, INSERT statement, Bulk insert of Data, UPDATE Statement, and Delete Statement.</p>	<p align="center">15 Hrs</p>	<p align="center">Chalk & Talk</p>	<p align="center"> (Mrs.N.Kavitha)</p>
<p align="center">September & October 2022</p>	<p align="center">IV</p>	<p>Joins and Unions: Joins, Unions. Triggers : Introduction, What is Trigger?, Types of Triggers, Trigger Syntax, Combining Trigger Types, Setting Inserted Values, Disabling and Enabling Triggers, Advantages and Limitations of Triggers. Cursor: Introduction, Cursor Operations, Cursor Positions, Cursor Coding Guidelines. Data Integrity: Introduction, Types of Integrity Constrains, Restrictions of Integrity constrains.</p>	<p align="center">15 Hrs</p>	<p align="center">Chalk & Talk</p>	<p align="center"> (Mrs.N.Kavitha)</p>

<p style="text-align: center;">October & November 2022</p>	<p style="text-align: center;">V</p>	<p>Database Security: Introduction, Database Environment, Data Security Risks, Complex User Management Requirements, Dimensions of Database security, Data Security Requirements, Protecting the Data within the Database, Granting and Revoking Privileges and Roles, Data Encryption, Database Integrity, Transaction Management and Concurrency Control: Introduction, Transactions, Transaction Properties, Database Structure, Transaction States, Concurrency Control, Serializability, Recoverability, Concurrency Control Schemes, Transaction Management in SQL, Transaction and Recovery User-defined Transactions, The COMMIT Command, The ROLLBACK command, The SAVEPOINT command.</p>	<p style="text-align: center;">15 Hrs</p>	<p style="text-align: center;">Chalk & Talk</p>	<p style="text-align: center;"> (Mrs.N.Kavitha)</p>
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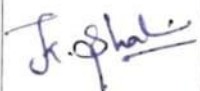
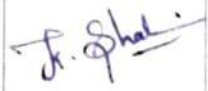
LESSON PLAN
2022-2023



Sub. Code :17SE5A

Semester: V

Title of the Paper : Computer Graphics

Total Hours : 60

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
August 22	I	Introduction to CG: A Survey of computer Graphics-Video Display Devices- Raster-Scan Systems-Random-Scan systems-Input Devices-Graphics software	III B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)
Sep 22	II	Output Primitives: Point and Lines. Line-Drawing Algorithms:- DDA Algorithm- Bresenham's Line algorithm – Character Generation. Attributes of Output Primitives: Line Attributes – Curve Attributes – Area-Fill Attributes – Character Attributes – Bundled Attributes – Inquiry Functions.	III B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)
Sep 22	III	Two-Dimensional Geometric transformations: Basic Transformations - Matrix Representations – Composite Transformations – Other Transformations. Two-Dimensional Viewing: Two Dimensional Viewing Functions – Clipping Operations – Point Clipping .Line Clipping: Cohen-Sutherland Line Clipping. Polygon Clipping: Sutherland-Hodgeman polygon – Curve Clipping – Text Clipping – Exterior Clipping.	III B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)

Oct 22	IV	Three-Dimensional Concepts: Three-Dimensional Display Methods – Three-Dimensional Graphics Packages. Three-Dimensional Object Representations: Polygon Surfaces – Curved Lines and Surfaces – Quadric Surfaces – Super quadrics..	III B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)
Oct 22	V	Color Models: Properties of Light – RGB Color Model – YIQ Color Models – CMY Color Model – HSB Color Model – Color Selection and Applications. Computer Animation: Design of Animation Sequences – General Computer Animation – Raster animations – Computer Animation languages – Key-Frame Systems.	III B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)


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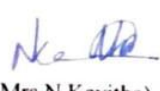
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LESSON PLAN
2022-2023

Class : III B.Sc(CS) 'A' And 'B'
Sub. Code : 17S61

Semester : VI

Title of the Paper: Data Communication and Networking
Total Hours : 75 Hours

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
December 2022	I	Introduction – Data Communications – Networks – The Internet – Protocols and Standards. Network Models: The OSI Model, Layers in the OSI Model.	III B.Sc., CS(A & B)	15 Hrs	Chalk & Talk	 (Mrs.N.Kavitha)
January 2023	II	Transmission media – Guided Media, Unguided Media: Wireless Switching: Circuit Switched Network, Datagram Networks, Virtual Circuit Networks, Structure of a Switch	III B.Sc., CS(A & B)	15 Hrs	Chalk & Talk	 (Mrs.N.Kavitha)
February 2023	III	Error Detection and Correction: Introduction, Block Coding, Linear Block Codes, Cyclic Codes. Network Layer: Logical Addressing: IPv4 Addresses, IPv6 Addresses.	III B.Sc., CS(A & B)	15 Hrs	Chalk & Talk	 (Mrs.N.Kavitha)

March 2023	IV	Network Layer: Delivery, Forwarding and Routing: Unicast Routing Protocols- Multicast Routing Protocols. Process-to-Process Delivery: UDP, TCP and SCTP: User Datagram Protocol (UDP)- TCP.Domain Name System: DNS in the internet.	III B.Sc., CS(A & B)	15 Hrs	Chalk & Talk	 (Mrs.N.Kavitha)
April 2023	V	Network Security: Security Services-Message Confidentiality-Message Integrity-Message Authentication-Digital Signature-Entity Authentication-IPSecurity-Firewalls	III B.Sc., CS(A & B)	15 Hrs	Chalk & Talk	 (Mrs.N.Kavitha)



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2022-2023

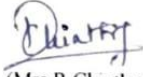
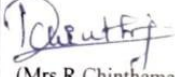
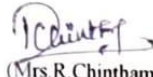
Sub. Code : 17S62

Class: III B.Sc(CS) 'A' And 'B'

Title of the Paper: WEB PROGRAMMING

Total Hours : 75 Hours

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
December 2022	I	Introduction to HTML5: Introduction-Editing HTML5-First HTML5 Example-W3C HTML5 Validation Service- Headings-Linking-Images- Special Characters and Horizontal Rules-Lists- Tables-Forms-Internal Linking-Meta Element- New HTML5 Form input Types. Introduction to Cascading Style Sheets™(CSS): Introduction –Inline Styles-Embedded Style Sheets- Linking External Style Sheets-Backgrounds- Color.	12 Hrs	Chalk & Talk	 (Mrs.R.Chinthamani)
January 2023	II	JavaScript: Introduction to Scripting: Introduction- Your First Script: Displaying a Line of Text with JavaScript in a Web Page. JavaScript: Function: Function Definitions-JavaScript Global Functions. JavaScript: Arrays: Arrays-Declaring and Allocating Arrays-Passing Arrays to Functions-	12 Hrs	Chalk & Talk	 (Mrs.R.Chinthamani)

		<p>Multidimensional Arrays- JavaScript: Objects: String Objects-Date Object-Boolean and Number Objects- Document Object-Using JSON to Represent Objects.</p>			
February 2023	III	<p>XML –Introduction- XMLBasics-Structuring Data-XML Namespaces- Document Type Definition (DTD)-W3C XML Vocabularies- Extensible Stylesheet Language and XSL Transformations- Document Object Model (DOM).</p>	12 Hrs	Chalk & Talk	 (Mrs. R. Chinthamani)
March 2023	IV	<p>Introducing PHP: What is PHP –Server-Side Scripting Overview : Static HTML – Client- Side Technologies – Server-Side Scripting - Getting Started with PHP: Installing PHP - Learning PHP Syntax and Variables : PHP Syntax's Syntax Is C- Like – Comments – Variables – Types in PHP – The Simple Types – Doubles – Booleans – NULL – Strings – Output.</p>	12 Hrs	Chalk & Talk	 (Mrs. R. Chinthamani)
April 2023	V	<p>Learning PHP Control Structures and Functions : Boolean Expressions – Branching – Looping – Using Functions – Function Documentation – Defining Your Own Functions – Functions</p>	12 Hrs	Chalk & Talk	 (Mrs. R. Chinthamani)

		and Variable Scope – Function Scope – Learning PHP String Handling : Strings in PHP , String Functions.			
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LESSON PLAN



2022-2023



Sub. Code : 17SE6A



Semester: VI

Title of the Paper : Data Mining

Total Hours : 60

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Jan 23	I	<p>Data warehousing: introduction- data warehouse architecture- dimensional modeling - OLAP operations- ROLAP- data marting - ETL- data cleaning ETL vs. ELT. Data mining: Introduction -- KDD vs. Data mining – DBMS vs. DM- DM techniques – Issues and Challenges in Data Mining – Data mining application areas- other related areas.</p>	III B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Mrs. P.Krishna Geetha)
Feb 23	II	<p>Classification Technique: Introduction – what is Decision Trees? - Tree Construction Principle - Decision Tree construction with presorting– CLOUDS- pruning technique. Clustering techniques: Clustering paradigms – Partitioning algorithm - K</p>	III B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Mrs. P.Krishna Geetha)

		Medeoid algorithms - CLARA - Hierarchical Clustering - DBSCAN - BIRCH - STIRR-ROCK.				
Feb 23	III	<p>Association Rules: what is an association rule?- methods to discover association rules - A priori algorithm - Partition algorithm - Dynamic Item set Counting algorithm - FP-tree growth algorithm- Eclat and dEclat - incremental algorithm- border algorithm - generalized association rule. Other techniques: Introduction- what is neural network? - Learning in NN - Unsupervised Learning - support vector machine.</p>	III B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Mrs. P.Krishna Geetha)
Mar 23	IV	<p>Genetic algorithm: introduction-Basic steps of GA-selection- crossover-mutation-data mining using GA. Web mining: Introduction - Web content mining - Web structure mining - Web usage mining. Temporal and Spatial mining: Introduction- what is temporal data mining?- temporal</p>	III B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Mrs. P.Krishna Geetha)

Mar 23	IV	Browsers: What is a Browser? – Basic Features of Web Browsers – Working of Internet Explorer – Toolbar Buttons – Working on the Web using the Browsers.	I Year	7 Hrs	Chalk and Talk	 (Mrs. P. Krishna Geetha)
April	V	Working with e-mail: e-mail –opening of e-mail account – Parts of e-mail text –Working with Messages – Reading a Message – Replying to a Message – Forwarding a Message – Deleting a Message – E-mail Clients.	I Year	7 Hrs	Chalk and Talk	 (Mrs. P. Krishna Geetha)



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