

# **KONGUNADU ARTS AND SCIENCE COLLEGE(AUTONOMOUS)**

**Re-Accredited by NAAC with 'A<sup>+</sup>' Grade (4<sup>th</sup> Cycle)**

**College of Excellence awarded by UGC**

**Coimbatore – 641 029.**



## **LESSON PLAN**

**Department of Computer Science with Data Analytics**

**Batch : 2022 - 2025**

**Semester : I (ODD)**

**Name of the Staff : Mrs.B.Praveena**

**Name of the Subject: Programming for Problem Solving using C(22UDA101)**

| S.NO                   | HOUR | PORTIONS TO BE COVERED                                  | MODE OF INSTRUCTIONS/DELIVERY (CHALK & TALK/PPT/FLIPPED CLASS etc |
|------------------------|------|---------------------------------------------------------|-------------------------------------------------------------------|
| <b>Unit I (15 hrs)</b> |      |                                                         |                                                                   |
| 1                      | 1    | Fundamentals of Computers : Introduction                | Chalk & Talk                                                      |
| 2                      | 1    | History of Computers                                    | Chalk & Talk                                                      |
| 3                      | 1    | Generations of Computers                                |                                                                   |
| 4                      | 1    | Classification of Computers                             | Chalk & Talk                                                      |
| 5                      | 1    | Basic Anatomy of a Computer System                      | Chalk & Talk                                                      |
| 6                      | 1    | Input Devices                                           | Chalk & Talk                                                      |
| 7                      | 1    | Processor                                               | Chalk & Talk                                                      |
| 8                      | 1    | Output Devices                                          | Chalk & Talk                                                      |
| 9                      | 1    | Memory Management                                       | Chalk & Talk                                                      |
| 10                     | 1    | Types of Software                                       | Chalk & Talk                                                      |
| 11                     | 1    | Overview of Operating System                            | Chalk & Talk                                                      |
| 12                     | 1    | Programming Languages                                   | Chalk & Talk                                                      |
| 13                     | 1    | Translator Programs                                     | Chalk & Talk                                                      |
| 14                     | 1    | Problem Solving Techniques                              | Chalk & Talk                                                      |
| 15                     | 1    | Overview of C.                                          | Chalk & Talk                                                      |
| <b>UNIT II (15hrs)</b> |      |                                                         |                                                                   |
| 16                     | 1    | Overview of C - Introduction                            | Chalk & Talk                                                      |
| 17                     | 1    | Character set, C tokens, keyword & Identifiers          | Chalk & Talk                                                      |
| 18                     | 1    | Constants , Variables , Data types                      | Chalk & Talk                                                      |
| 19                     | 1    | Declaration of variables, Assigning values to variables | Chalk & Talk                                                      |
| 20                     | 1    | Defining Symbolic Constants                             | Chalk & Talk                                                      |
| 21                     | 1    | Arithmetic, Relational, Logical, Assignment             | Chalk & Talk                                                      |
| 22                     | 1    | Conditional, Bitwise, Special                           | Chalk & Talk                                                      |
| 23                     | 1    | Increment and Decrement operator                        | Chalk & Talk                                                      |
| 24                     | 1    | Arithmetic Expressions - Evaluation of expression       | Chalk & Talk                                                      |
| 25                     | 1    | precedence of arithmetic operators                      | PPT                                                               |
| 26                     | 1    | Type conversion in expression                           | Chalk & Talk                                                      |
| 27                     | 1    | operator precedence & associativity                     | Chalk & Talk                                                      |
| 28                     | 1    | Mathematical functions                                  | Chalk & Talk                                                      |
| 29                     | 1    | Reading and Writing a character                         | Chalk & Talk                                                      |
| 30                     | 1    | Formatted input and output.                             | Chalk & Talk                                                      |

|    |   |                                                    |              |
|----|---|----------------------------------------------------|--------------|
|    |   | <b>UNIT III (15hrs)</b>                            |              |
| 31 | 1 | Decision Making and Branching: Introduction        | Chalk & Talk |
| 32 | 1 | if, if....else                                     | Chalk & Talk |
| 33 | 1 | nesting of if                                      | Chalk & Talk |
| 34 | 1 | else statements                                    | Chalk & Talk |
| 35 | 1 | else if ladder                                     | PPT          |
| 36 | 1 | The switch statement                               | Chalk & Talk |
| 37 | 1 | The?: Operator                                     | Chalk & Talk |
| 38 | 1 | The goto Statement                                 | Chalk & Talk |
| 39 | 1 | Decision Making and Looping: Introduction          | Chalk & Talk |
| 40 | 1 | The while statement                                | Chalk & Talk |
| 41 | 1 | the do statement                                   | Chalk & Talk |
| 42 | 1 | The for statement                                  | Chalk & Talk |
| 43 | 1 | Jumps in loops                                     | PPT          |
| 44 | 1 | Arrays                                             | Chalk & Talk |
| 45 | 1 | Character Arrays and Strings.                      | Chalk & Talk |
|    |   | <b>UNIT IV (15hrs)</b>                             |              |
| 46 | 1 | User-Defined Functions: Introduction               | Chalk & Talk |
| 47 | 1 | Need and Elements of User-Defined Functions        | Chalk & Talk |
| 48 | 1 | Definition                                         | Chalk & Talk |
| 49 | 1 | Return Values and their types                      | Chalk & Talk |
| 50 | 1 | Function Calls                                     | Chalk & Talk |
| 51 | 1 | Declarations                                       | Chalk & Talk |
| 52 | 1 | Category of Functions                              | Chalk & Talk |
| 53 | 1 | Category of Functions                              | Chalk & Talk |
| 54 | 1 | Nesting of Functions                               | Chalk & Talk |
| 55 | 1 | Recursion                                          | Chalk & Talk |
| 56 | 1 | Passing Arrays and Strings to Functions            | Chalk & Talk |
| 57 | 1 | Passing Arrays and Strings to Functions            | Chalk & Talk |
| 58 | 1 | The Scope, Visibility and Lifetime of Variables    | PPT          |
| 59 | 1 | Multi file Programs                                | Chalk & Talk |
| 60 | 1 | Structures and Unions                              | Chalk & Talk |
|    |   | <b>UNIT V (15hrs)</b>                              |              |
| 61 | 1 | Pointers: Introduction                             | Chalk & Talk |
| 62 | 1 | Understanding pointers                             | Chalk & Talk |
| 63 | 1 | Accessing the address of a variable                | Chalk & Talk |
| 64 | 1 | Declaration and Initialization of pointer Variable | Chalk & Talk |
| 65 | 1 | Accessing a variable through its                   | PPT          |

|    |   |                                                 |              |
|----|---|-------------------------------------------------|--------------|
|    |   | pointer                                         |              |
| 66 | 1 | Chain of pointers                               | Chalk & Talk |
| 67 | 1 | Pointer Expressions                             | Chalk & Talk |
| 68 | 1 | Pointer Increments and Scale factor             | Chalk & Talk |
| 69 | 1 | Pointers and Arrays                             | Chalk & Talk |
| 70 | 1 | Pointers and Strings                            | Chalk & Talk |
| 71 | 1 | Array of pointers                               | Chalk & Talk |
| 72 | 1 | Pointers as Function Arguments                  | PPT          |
| 73 | 1 | Functions returning pointers                    | Chalk & Talk |
| 74 | 1 | Pointers to Functions – Pointers and Structures | Chalk & Talk |
| 75 | 1 | File Management in C.                           | Chalk & Talk |



Signature of the Staff

(Mrs.B.Praveena)



Signature of the HoD

(Dr.L.Kathirvel Kumaran)

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**Coimbatore – 641 029.**



## **LESSON PLAN**

Department of Computer Science with <sup>Dala</sup> Analytics

Batch : 2022 -2025

Semester : II (EVEN)

Name of the Staff: B.Praveena

Name of the Subject: Programming for Problem Solving using C  
Laboratory(22UDA1CL)

| <b>Prg.NO</b> | <b>HOUR</b> | <b>Program / Concept</b>                             | <b>MODE OF INSTRUCTIONS/DELIVERY (CHALK &amp; TALK/PPT/FLIPPED CLASS etc</b> |
|---------------|-------------|------------------------------------------------------|------------------------------------------------------------------------------|
| 1             | 1           | Control Structures                                   | Lab, Discussion                                                              |
| 2             | 2           | Simple if Statement.                                 | Lab                                                                          |
| 3             | 3           | if – else Statement                                  | Lab                                                                          |
| 4             | 4           | Nested if-else statement                             | Lab                                                                          |
| 5             | 5           | for Loop, while Loop, do-while Loop                  | Flipped class                                                                |
| 6             | 6           | goto Statement, break Statement, continue Statement. | Discussion                                                                   |
| 7             | 7           | Switch case                                          | PPT,Lab                                                                      |
| 8             | 8           | Switch case                                          | Lab                                                                          |
| 9             | 9           | Break statement                                      | Lab                                                                          |
| 10            | 10          | Break statement                                      | PPT,Lab                                                                      |
| 11            | 11          | Examples                                             | Lab                                                                          |
| 12            | 12          | Examples                                             | PPT,Lab                                                                      |
| 13            | 13          | Implementation of looping                            | Discussion                                                                   |
| 14            | 14          | Implementation of looping                            | Lab                                                                          |
| 15            | 15          | For loop                                             | Discussion                                                                   |
| 16            | 16          | For each loop                                        | PPT,Lab                                                                      |
| 17            | 17          | While loop                                           | Lab, Discussion                                                              |
| 18            | 18          | Do-while loop                                        | Discussion                                                                   |
| 19            | 19          | Examples                                             | PPT,Lab                                                                      |
| 20            | 20          | Examples                                             | Flipped class                                                                |
| 21            | 21          | implementation of looping & Control Structures       | PPT,Lab                                                                      |
| 22            | 22          | Go to statement                                      | Discussion                                                                   |
| 23            | 23          | Looping structures                                   | PPT,Lab                                                                      |
| 24            | 24          | While loop                                           | PPT,Lab                                                                      |
| 25            | 25          | Do while loop                                        | PPT,Lab                                                                      |
| 26            | 26          | For loop                                             | Lab, Discussion                                                              |
| 27            | 27          | Examples                                             | Lab                                                                          |
| 28            | 28          | Recursive function                                   | Lab                                                                          |
| 29            | 29          | Return statements                                    | Lab                                                                          |
| 30            | 30          | Factorial numbers                                    | Flipped class                                                                |
| 31            | 31          | Examples                                             | Discussion                                                                   |
| 32            | 32          | Examples                                             | PPT,Lab                                                                      |
| 33            | 33          | Palindrome in a given sentence                       | Flipped class                                                                |
| 34            | 34          | Palindrome in a given sentence                       | PPT,Lab                                                                      |

| <b>Fig. NO</b> | <b>HOUR</b> | <b>Program / Concept</b>                  | <b>MODE OF INSTRUCTIONS/DELIVERY (CHALK &amp; TALK/PPT/FLIPPED CLASS etc</b> |
|----------------|-------------|-------------------------------------------|------------------------------------------------------------------------------|
| 35             | 35          | Palindrome formula                        | PPT,Lab                                                                      |
| 36             | 36          | Examples                                  | PPT,Lab                                                                      |
| 37             | 37          | Examples                                  | Lab, Discussion                                                              |
| 38             | 38          | Examples                                  | PPT,Lab                                                                      |
| 39             | 39          | Manipulate strings using string functions | Discussion                                                                   |
| 40             | 40          | Strcpy() function                         | Lab, Discussion                                                              |
| 41             | 41          | Strcat() function                         | Lab, Discussion                                                              |
| 42             | 42          | Strcmp() function                         | Lab                                                                          |
| 43             | 43          | Strlwr() function                         | Lab                                                                          |
| 44             | 44          | Examples                                  | Lab                                                                          |
| 45             | 45          | Examples                                  | Flipped class                                                                |
| 46             | 46          | Functions                                 | Discussion                                                                   |
| 47             | 47          | Function declaration                      | PPT,Lab                                                                      |
| 48             | 48          | Function call                             | PPT,Lab                                                                      |
| 49             | 49          | Arguments                                 | Lab, Discussion                                                              |
| 50             | 50          | Return values                             | PPT,Lab                                                                      |
| 51             | 51          | Examples                                  | Discussion                                                                   |
| 52             | 52          | Examples                                  | PPT,Lab                                                                      |
| 53             | 53          | Swap two integers using pointers          | Lab, Discussion                                                              |
| 54             | 54          | Swap two integers using pointers          | Lab, Discussion                                                              |
| 55             | 55          | Null pointer                              | Lab                                                                          |
| 56             | 56          | Void pointer                              | Lab                                                                          |
| 57             | 57          | Swapping examples                         | Lab                                                                          |
| 58             | 58          | Swapping examples                         | Flipped class                                                                |
| 59             | 59          | Structures                                | Discussion                                                                   |
| 60             | 60          | Structures                                | Flipped class                                                                |
| 61             | 61          | Int                                       | Discussion                                                                   |
| 62             | 62          | Float                                     | PPT,Lab                                                                      |
| 63             | 63          | char                                      | PPT,Lab                                                                      |
| 64             | 64          | Double                                    | Lab, Discussion                                                              |
| 65             | 65          | Array of Structures                       | PPT,Lab                                                                      |
| 66             | 66          | Datatypes                                 | Discussion                                                                   |
| 67             | 67          | Examples                                  | PPT,Lab                                                                      |
| 68             | 68          | Calculate electricity bill using files    | Lab, Discussion                                                              |
| 69             | 69          | Text files                                | PPT,Lab                                                                      |
| 70             | 70          | Binary files                              | Lab, Discussion                                                              |

| <b>Prg.NO</b> | <b>HOUR</b> | <b>Program / Concept</b>     | <b>MODE OF INSTRUCTIONS/DELIVERY (CHALK &amp; TALK/PPT/FLIPPED CLASS etc</b> |
|---------------|-------------|------------------------------|------------------------------------------------------------------------------|
| 71            | 71          | Encrypt and decrypt a string | PPT,Lab                                                                      |
| 72            | 72          | Strings                      | Lab, Discussion                                                              |
| 73            | 73          | Examples                     | PPT,Lab                                                                      |
| 74            | 74          | Encrypt and decrypt files    | Lab, Discussion                                                              |
| 75            | 75          | Examples                     | Lab, Discussion                                                              |



Signature of the Staff

(Mrs.B.Praveena)



Signature of the HoD

(Dr.L.Kathirvel kumaran)

# KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), COIMBATORE - 29.

## ACADEMIC PLANNING

Department : B.Sc. CS with DA

Name of the Teacher : Mrs. B. Praveena

Year 2022 - 2023

Title of the Paper : Object Oriented Programming Subject Code : .....

22UDA202

Semester : ODD / EVEN

| Test No. & Period                                                           | Topics allotted                                                                                                                                                                                                                                                                                                                | No. of hours required for completion | Dates & hrs of handling                                         | Topics not covered, if any | Signature of |                    |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-----------------------------------------------------------------|----------------------------|--------------|--------------------|
|                                                                             |                                                                                                                                                                                                                                                                                                                                |                                      |                                                                 |                            | Staff        | HOD                |
| I<br>From :<br>02/01/2023<br>To :<br>1 <sup>st</sup> - 5 <sup>th</sup> hr.  | Unit - I<br>Introduction to c++ - Key concepts of OOPS- Advantages - OOPS languages - I/O in c++ - Declarations - Control Structures - Decision Making & Statements If, else, Jump, goto, break, continue, Switchcase, Statements - Loops in c++ : for, while, do - functions in c++ - Inline functions - function Overloading | 15 hours                             | 02/01/2023<br>-<br>1 <sup>st</sup> DO -<br>5 <sup>th</sup> hour | -                          |              | <i>[Signature]</i> |
| II<br>From :<br>14/02/2023<br>To :<br>1 <sup>st</sup> - 3 <sup>rd</sup> hr. | Unit - 2<br>Classes & objects - Declaring objects - Defining member functions - Static member variables and functions - Array of objects - Friend functions - Overloading Member functions - Bit fields and classes - Constructor and Destructor with Static members.                                                          | 15 hours                             | 14/02/2023<br>-<br>1 <sup>st</sup> DO -<br>3 <sup>rd</sup> hr.  | -                          |              | <i>[Signature]</i> |

# KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), COIMBATORE - 29.

## ACADEMIC PLANNING

Department : B.Sc CS with DA

Name of the Teacher : Mrs. B. Praveena

Year 2022 - 2023

Title of the Paper : Object Oriented Programming Subject Code : 22UDA202

Semester : ODD / EVEN

| Test No. & Period                                                                         | Topics allotted                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No. of hours required for completion | Dates & hrs of handling                                           | Topics not covered, if any | Signature of |  |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------|----------------------------|--------------|--|
| I<br>From :<br>16/2/23<br>To :<br>VI <sup>th</sup> Day<br>Order<br>3 <sup>rd</sup> hour   | Unit-3<br>Operator Overloading: Overloading unary, Binary Operators - Overloading friend functions - type conversion - Inheritance: Types of inheritance - Single, Multilevel, Multiple, Hierarchical, Hybrid, Multipath Inheritance, virtual Base classes - Abstract<br>Unit-4 - Pointers - Declaration - Pointer to class, object - this pointer - Pointer to derived classes and Base classes - Arrays - Characteristics - Array of classes - Memory Models - new and delete operators | 15 hours                             | 16/2/23<br>VI <sup>th</sup> Day<br>Order<br>3 <sup>rd</sup> hour  | -                          |              |  |
| II<br>From :<br>24/4/23<br>To :<br>III <sup>rd</sup> day<br>Order<br>3 <sup>rd</sup> hour | dynamic object - Binding, Polymorphism and virtual functions.<br>Unit-5 :- files - file stream classes - File modes - Sequential Read/write Operations - Binary and ASCII files - Random Access. Operations - Templates - Exception handling - Strings - Declaring and Initializing string objects - string attributes - Miscellaneous functions.                                                                                                                                         | 15 hours                             | 24/4/23<br>III <sup>rd</sup> day<br>Order<br>3 <sup>rd</sup> hour | -                          |              |  |

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## **LESSON PLAN**

**Department of Computer Science with Data Analytics**

**Batch : 2021 - 2024**

**Semester : III (ODD)**

**Name of the Staff : Mrs P. Sumitha**

**Name of the Subject: Object Oriented Programming in Java (21UDA304)**

| S.NO                   | HOUR | PORTIONS TO BE COVERED                             | MODE OF INSTRUCTIONS/DELIVERY (CHALK & TALK/PPT/FLIPPED CLASS etc |
|------------------------|------|----------------------------------------------------|-------------------------------------------------------------------|
| <b>Unit I (18hrs)</b>  |      |                                                    |                                                                   |
| 1                      | 1    | Introduction to Object-Oriented Paradigm           | Chalk & Talk                                                      |
| 2                      | 1    | Basic Concepts of Object-Oriented Programming java | Chalk & Talk                                                      |
| 3                      | 1    | Benefits of Object-Oriented Paradigm               | Chalk & Talk                                                      |
| 4                      | 1    | Application of Object-Oriented Programming         | Chalk & Talk                                                      |
| 5                      | 1    | Characteristics of java                            | Chalk & Talk                                                      |
| 6                      | 1    | Java environment                                   | Chalk & Talk                                                      |
| 7                      | 1    | Java syntax                                        | Chalk & Talk                                                      |
| 8                      | 1    | Java comments                                      | Chalk & Talk                                                      |
| 9                      | 1    | Java variables                                     | Chalk & Talk                                                      |
| 10                     | 1    | Java Data types                                    | Chalk & Talk                                                      |
| 11                     | 1    | Java Type casting                                  | Chalk & Talk                                                      |
| 12                     | 1    | Java Operators                                     | Chalk & Talk                                                      |
| 13                     | 1    | Java Operators                                     | Chalk & Talk                                                      |
| 14                     | 1    | Java Operators                                     | Chalk & Talk                                                      |
| 15                     | 1    | Java String                                        | Chalk & Talk                                                      |
| 16                     | 1    | Java String function                               | Chalk & Talk                                                      |
| 17                     | 1    | Java math function                                 | Chalk & Talk                                                      |
| 18                     | 1    | Java Booleans                                      | Chalk & Talk                                                      |
| <b>UNIT II (18hrs)</b> |      |                                                    |                                                                   |
| 19                     | 1    | Java If...Else                                     | Chalk & Talk                                                      |
| 20                     | 1    | Java switch                                        | Chalk & Talk                                                      |
| 21                     | 1    | Java while loop                                    | Chalk & Talk                                                      |
| 22                     | 1    | Java For loop                                      | Chalk & Talk                                                      |
| 23                     | 1    | Java Break /continue                               | Chalk & Talk                                                      |
| 24                     | 1    | Java Arrays                                        | Chalk & Talk                                                      |
| 25                     | 1    | Methods-Method parameters                          | PPT                                                               |
| 26                     | 1    | Method overloading                                 | Chalk & Talk                                                      |
| 27                     | 1    | Scope -java Recursion                              | Chalk & Talk                                                      |
| 28                     | 1    | Encapsulation                                      | Chalk & Talk                                                      |
| 29                     | 1    | Jumps in Loops                                     | Chalk & Talk                                                      |

|                         |   |                                                      |              |
|-------------------------|---|------------------------------------------------------|--------------|
| 30                      | 1 | Java packages                                        | Chalk & Talk |
| 31                      | 1 | Java Inheritance                                     | Chalk & Talk |
| 32                      | 1 | Java polymorphism                                    | Chalk & Talk |
| 33                      | 1 | Java inner classes                                   | Chalk & Talk |
| 34                      | 1 | Java abstraction                                     | Chalk & Talk |
| 35                      | 1 | Java interface                                       | Chalk & Talk |
| 36                      | 1 | Java user input                                      | PPT          |
| <b>UNIT III (18hrs)</b> |   |                                                      |              |
| 37                      | 1 | Exceptions                                           | Chalk & Talk |
| 38                      | 1 | Exception hierarchy                                  | Chalk & Talk |
| 39                      | 1 | Throwing                                             | Chalk & Talk |
| 40                      | 1 | Catching exceptions                                  | Chalk & Talk |
| 41                      | 1 | Built-in exceptions                                  | Chalk & Talk |
| 42                      | 1 | Creating own exceptions                              | Chalk & Talk |
| 43                      | 1 | Stack Trace Elements                                 | PPT          |
| 44                      | 1 | Input basics                                         | Chalk & Talk |
| 45                      | 1 | Output basics                                        | Chalk & Talk |
| 46                      | 1 | Streams                                              | Chalk & Talk |
| 47                      | 1 | Byte streams                                         | Chalk & Talk |
| 48                      | 1 | Character streams                                    | Chalk & Talk |
| 49                      | 1 | Java File Handling                                   | Chalk & Talk |
| 50                      | 1 | Java Files                                           | Chalk & Talk |
| 51                      | 1 | Java Create files                                    | Chalk & Talk |
| 52                      | 1 | Java Write files                                     | Chalk & Talk |
| 53                      | 1 | Java Read Files                                      | Chalk & Talk |
| 54                      | 1 | Java Delete Files                                    | PPT          |
| <b>UNIT IV (18hrs)</b>  |   |                                                      |              |
| 55                      | 1 | Differences between multi-threading and multitasking | Chalk & Talk |
| 56                      | 1 | Thread life cycle                                    | Chalk & Talk |
| 57                      | 1 | Creating threads                                     | Chalk & Talk |
| 58                      | 1 | Synchronizing threads                                | PPT          |
| 59                      | 1 | Inter-thread communication                           | Chalk & Talk |
| 60                      | 1 | Daemon threads                                       | Chalk & Talk |
| 61                      | 1 | Daemon threads                                       | Chalk & Talk |
| 62                      | 1 | Thread groups                                        | Chalk & Talk |
| 63                      | 1 | Thread groups                                        | Chalk & Talk |
| 64                      | 1 | Generic Programming                                  | Chalk & Talk |
| 65                      | 1 | Generic Programming                                  | PPT          |
| 66                      | 1 | Generic classes                                      | Chalk & Talk |
| 67                      | 1 | Generic classes                                      | Chalk & Talk |
| 68                      | 1 | Generic methods                                      | Chalk & Talk |

|                       |   |                                        |              |
|-----------------------|---|----------------------------------------|--------------|
| 69                    | 1 | Generic methods                        | Chalk & Talk |
| 70                    | 1 | Bounded types                          | Chalk & Talk |
| 71                    | 1 | Bounded types                          | Chalk & Talk |
| 72                    | 1 | Restrictions                           | PPT          |
| 73                    | 1 | Limitations                            | Chalk & Talk |
| <b>UNIT V (12hrs)</b> |   |                                        |              |
| 74                    | 1 | Graphics programming                   | Chalk & Talk |
| 75                    | 1 | Applet Programming                     | Chalk & Talk |
| 76                    | 1 | AWTClasses-Frame-components-           | Chalk & Talk |
| 77                    | 1 | Working with 2D shapes                 | Chalk & Talk |
| 78                    | 1 | Using color, fonts, images             | Chalk & Talk |
| 79                    | 1 | Basics of event handling               | Chalk & Talk |
| 80                    | 1 | Event handlers                         | Chalk & Talk |
| 81                    | 1 | Adapter classes                        | Chalk & Talk |
| 82                    | 1 | Actions-mouse events                   | Chalk & Talk |
| 83                    | 1 | Awt event hierarchy                    | Chalk & Talk |
| 84                    | 1 | Introduction to Swing                  | Chalk & Talk |
| 85                    | 1 | Layout management                      | Chalk & Talk |
| 86                    | 1 | Swing components                       | Chalk & Talk |
| 87                    | 1 | Text fields-Text areas -               | Chalk & Talk |
| 88                    | 1 | Buttons, - Check Boxes                 | Chalk & Talk |
| 89                    | 1 | Radio buttons-lists- choices           | Chalk & Talk |
| 90                    | 1 | Scrollbars -Windows menu, Dialog boxes | Chalk & Talk |



Signature of the Staff

(Mrs.P.Sumitha)



Signature of the HoD

(Dr.L.Kathirvel Kumaran)

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**Coimbatore – 641 029.**



## **LESSON PLAN**

**Department of Computer Science with Data Analytics**

**Batch: 2021 - 2024**

**Semester: III (ODD)**

**Name of the Staff: Mrs.P.Sumitha**

**Name of the Subject: Object Oriented Programming in Java Laboratory**

**(21UDA3CO)**

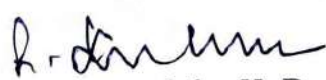
| <b>S.NO</b> | <b>HOURL</b> | <b>PORTIONS TO BE COVERED</b>                                         | <b>MODE OF INSTRUCTIONS/DELIVERY (CHALK &amp; TALK/PPT/FLIPPED CLASS etc</b> |
|-------------|--------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------|
| 1           | 1            | Discussed about packages used in java                                 | Chalk & Talk                                                                 |
| 2           | 1            | Discussed about ide net beans                                         | Chalk & Talk                                                                 |
| 3           | 1            | Explained about predefined function and user defined function         | Chalk & Talk                                                                 |
| 4           | 1            | Explained about print and println                                     | Chalk & Talk                                                                 |
| 5           | 1            | Executed sample program using print function                          | Chalk & Talk                                                                 |
| 6           | 1            | Executed program "hello world" and receive input from user            | Flipped Class                                                                |
| 7           | 1            | Discussed about operator                                              | Chalk & Talk                                                                 |
| 8           | 1            | Discussed about types of operators                                    | Chalk & Talk                                                                 |
| 9           | 1            | Explained about arithmetic operator                                   | PPT                                                                          |
| 10          | 1            | Executed program using arithmetic operation using predefined function | PPT                                                                          |
| 11          | 1            | Executed program arithmetic operation using user defined function     | Chalk & Talk                                                                 |
| 12          | 1            | Executed program arithmetic operation using user defined function     | Chalk & Talk                                                                 |
| 13          | 1            | Discussed about vowels and consonants                                 | Flipped Class                                                                |
| 14          | 1            | Discussed about switch statement                                      | Chalk & Talk                                                                 |
| 15          | 1            | Explained about break and default Statement                           | Chalk & Talk                                                                 |
| 16          | 1            | Executed the program whether an alphabet is a vowel or a constant     | Chalk & Talk                                                                 |
| 17          | 1            | Discussed about largest among three numbers                           | Chalk & Talk                                                                 |
| 18          | 1            | Explained the if condition used to check largest among three numbers  | Chalk & Talk                                                                 |
| 19          | 1            | Discussed about logical and relational operator                       | PPT                                                                          |
| 20          | 1            | Executed the program largest among three numbers                      | Chalk & Talk                                                                 |
| 21          | 1            | Executed the program largest among three numbers                      | Chalk & Talk                                                                 |

|    |   |                                                                 |               |
|----|---|-----------------------------------------------------------------|---------------|
| 22 | 1 | Discussed about array                                           | Chalk & Talk  |
| 23 | 1 | Explained about scanner function to receive input from user     | Chalk & Talk  |
| 24 | 1 | Discussed how to find average                                   | Chalk & Talk  |
| 25 | 1 | Discussed average using array                                   | Chalk & Talk  |
| 26 | 1 | Executed average about string types                             | Chalk & Talk  |
| 27 | 1 | Executed average about string types                             | Chalk & Talk  |
| 28 | 1 | Discussed about if statement to check the condition             | Chalk & Talk  |
| 29 | 1 | Explained about recursion                                       | Chalk & Talk  |
| 30 | 1 | Discussed string reverse                                        | Chalk & Talk  |
| 31 | 1 | Explained string reverse using predefined function              | Chalk & Talk  |
| 32 | 1 | Explained string reverse using user defined function            | Chalk & Talk  |
| 33 | 1 | Executed the program Sentence using Recursion                   | Flipped Class |
| 34 | 1 | Executed the program Sentence using Recursion                   | Flipped Class |
| 35 | 1 | Executed the program Sentence using Recursion                   | Chalk & Talk  |
| 36 | 1 | Discussed lexicographical order                                 | Chalk & Talk  |
| 37 | 1 | Discussed lexicographical order                                 | Chalk & Talk  |
| 38 | 1 | Explained syntax lexicographical order                          | Chalk & Talk  |
| 39 | 1 | Explained syntax lexicographical order                          | Chalk & Talk  |
| 40 | 1 | Discussed about for loop and nested for loop                    | Chalk & Talk  |
| 41 | 1 | Discussed word sorting using compare to method                  | Chalk & Talk  |
| 42 | 1 | Discussed string variables get a array of string from user      | Chalk & Talk  |
| 43 | 1 | Executed the program by sort elements in lexicographical order  | Chalk & Talk  |
| 44 | 1 | Executed the program by sort elements in lexicographical order  | Chalk & Talk  |
| 45 | 1 | Discussed about inheritance                                     | PPT           |
| 46 | 1 | Explained about base class                                      | Chalk & Talk  |
| 47 | 1 | Explained about child class and how it extended from base class | Chalk & Talk  |
| 48 | 1 | Executed single inheritance program                             | Chalk & Talk  |
| 49 | 1 | Executed single inheritance program                             | PPT           |
| 50 | 1 | Discussed about scanner package                                 | Chalk & Talk  |
| 51 | 1 | Explained the syntax used in string extract                     | Chalk & Talk  |
| 52 | 1 | Explained about start index and end index                       | Flipped Class |

|    |   |                                                                                                 |               |
|----|---|-------------------------------------------------------------------------------------------------|---------------|
| 53 | 1 | Discussed extracted string and how it store in temporary variable                               | Chalk & Talk  |
| 54 | 1 | Executed the program to extract a portion of character string and print the extracted character | Chalk & Talk  |
| 55 | 1 | Executed the program to extract a portion of character string and print the extracted character | Chalk & Talk  |
| 56 | 1 | Discussed about inheritance concept                                                             | Chalk & Talk  |
| 57 | 1 | Explained types of inheritance                                                                  | Chalk & Talk  |
| 58 | 1 | Discusses about multiple inheritance, interface and extends                                     | Chalk & Talk  |
| 59 | 1 | Explained about base class and sub class how it very from other inheritance                     | Chalk & Talk  |
| 60 | 1 | Executed the multiple inheritance program                                                       | PPT           |
| 61 | 1 | Executed the multiple inheritance program                                                       | Chalk & Talk  |
| 62 | 1 | Executed the multiple inheritance program                                                       | Chalk & Talk  |
| 63 | 1 | Discussed about exception and try block                                                         | Chalk & Talk  |
| 64 | 1 | Discussed about catch block                                                                     | Chalk & Talk  |
| 65 | 1 | Explained out of bound exception                                                                | Chalk & Talk  |
| 66 | 1 | Executed the array out of bound exception program                                               | Chalk & Talk  |
| 67 | 1 | Executed the array out of bound exception program                                               | Chalk & Talk  |
| 68 | 1 | Discussed about swing package                                                                   | Chalk & Talk  |
| 69 | 1 | Explained about awt component and package                                                       | Flipped Class |
| 70 | 1 | Discussed about event listener                                                                  | Flipped Class |
| 71 | 1 | Explained about adding label, text field and reading values.                                    | Chalk & Talk  |
| 72 | 1 | Executed the text field program                                                                 | Chalk & Talk  |
| 73 | 1 | Executed the text field program                                                                 | Chalk & Talk  |
| 74 | 1 | Discussed about text fields                                                                     | Chalk & Talk  |
| 75 | 1 | Explained about buttons, label                                                                  | PPT           |
| 76 | 1 | Discussed if condition to check the field values                                                | Chalk & Talk  |
| 77 | 1 | Executed the program text field with multiple lines                                             | Chalk & Talk  |
| 78 | 1 | Executed the program text field with multiple lines                                             | Flipped Class |
| 79 | 1 | Discussed about menu bars                                                                       | Chalk & Talk  |

|    |   |                                                             |              |
|----|---|-------------------------------------------------------------|--------------|
| 80 | 1 | Explained about pulldown menus                              | Chalk & Talk |
| 81 | 1 | Discussed about syntax used in menu bars and pulldown menus | Chalk & Talk |
| 82 | 1 | Discussed about syntax used in menu bars and pulldown menus | Chalk & Talk |
| 83 | 1 | Executed the menu bars and pull-down menus program          | Chalk & Talk |
| 84 | 1 | Executed the menu bars and pull-down menus program          | Chalk & Talk |
| 85 | 1 | Discussed about appending file                              | Chalk & Talk |
| 86 | 1 | Discussed about appending file                              | Chalk & Talk |
| 87 | 1 | Explained about file read                                   | Chalk & Talk |
| 88 | 1 | Explained about file write                                  | Chalk & Talk |
| 89 | 1 | Executed append file program                                | Chalk & Talk |
| 90 | 1 | Executed append file program                                | Chalk & Talk |

  
 Signature of the Staff  
 (Mrs.P.Sumitha)

  
 Signature of the HoD  
 (Dr.L.Kathirvel Kumaran)

# **KONGUNADU ARTS AND SCIENCE COLLEGE(AUTONOMOUS)**

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## **LESSON PLAN**

**Department of Computer Science with Data Analytics**

**Batch: 2021 - 2024**

**Semester: III (ODD)**

**Name of the Staff: Dr. S. Nithya**

**Name of the Subject: Text and Predictive Analytics (21UDA3A3)**

| S.NO                    | HOUR | PORTIONS TO BE COVERED                                        | MODE OF INSTRUCTIONS/DELIVERY<br>(CHALK & TALK/PPT/FLIPPED CLASS etc) |
|-------------------------|------|---------------------------------------------------------------|-----------------------------------------------------------------------|
| <b>Unit I (18 hrs)</b>  |      |                                                               |                                                                       |
| 1                       | 1    | Introduction to Text Mining: Text Representation              | Chalk & Talk                                                          |
| 2                       | 1    | tokenization                                                  | Chalk & Talk                                                          |
| 3                       | 1    | stemming                                                      | Chalk & Talk                                                          |
| 4                       | 1    | stop words                                                    | Chalk & Talk                                                          |
| 5                       | 1    | TF-IDF                                                        | Chalk & Talk                                                          |
| 6                       | 1    | Feature Vector Representation                                 | Flipped Class                                                         |
| 7                       | 1    | NER                                                           | Chalk & Talk                                                          |
| 8                       | 1    | N-gram Modeling                                               | Chalk & Talk                                                          |
| 9                       | 1    | Mining Textual Data: Text Clustering                          | PPT                                                                   |
| 10                      | 1    | Text Classification                                           | PPT                                                                   |
| 11                      | 1    | Topic Modeling -LDA                                           | Chalk & Talk                                                          |
| 12                      | 1    | HDP                                                           | Chalk & Talk                                                          |
| 13                      | 1    | Recent Trends in Text                                         | Flipped Class                                                         |
| 14                      | 1    | Web and Social Media Analytics. C                             | Chalk & Talk                                                          |
| 15                      | 1    | Characteristics of the data streams                           | Chalk & Talk                                                          |
| 16                      | 1    | Challenges in mining data streams                             | Chalk & Talk                                                          |
| 17                      | 1    | Requirements and principles for real time processing          | Chalk & Talk                                                          |
| 18                      | 1    | Concept drift Incremental learning                            | Chalk & Talk                                                          |
| <b>UNIT-II (18 hrs)</b> |      |                                                               |                                                                       |
| 19                      | 1    | Basic Streaming Methods                                       | PPT                                                                   |
| 20                      | 1    | Counting the Number of Occurrence of the Elements in a Stream | Chalk & Talk                                                          |
| 21                      | 1    | Counting the Number of Occurrence of the Elements in a Stream | Chalk & Talk                                                          |
| 22                      | 1    | Counting the Number of Distinct Values in a Stream            | Chalk & Talk                                                          |
| 23                      | 1    | Counting the Number of Distinct Values in a Stream            | Chalk & Talk                                                          |
| 24                      | 1    | Bounds of Random Variables                                    | Chalk & Talk                                                          |
| 25                      | 1    | Poisson Processes                                             | Chalk & Talk                                                          |
| 26                      | 1    | Poisson Processes                                             | Chalk & Talk                                                          |
| 27                      | 1    | Maintaining Simple Statistics from Data Streams               | Chalk & Talk                                                          |
| 28                      | 1    | Sliding Windows                                               | Chalk & Talk                                                          |
| 29                      | 1    | Sliding Windows                                               | Chalk & Talk                                                          |
| 30                      | 1    | Data Synopsis                                                 | Chalk & Talk                                                          |
| 31                      | 1    | Data Synopsis                                                 | Chalk & Talk                                                          |
| 32                      | 1    | Change Detection                                              | Chalk & Talk                                                          |
| 33                      | 1    | Tracking Drifting Concepts                                    | Flipped Class                                                         |

|    |   |                                 |               |
|----|---|---------------------------------|---------------|
| 33 | 1 | Tracking Drifting Concepts      |               |
| 34 | 1 | Tracking Drifting Concepts      | Flipped Class |
| 35 | 1 | Monitoring the Learning Process | Flipped Class |
| 36 | 1 | Monitoring the Learning Process | Chalk & Talk  |
|    |   |                                 | Chalk & Talk  |

### UNIT-III (18 hrs)

|    |   |                                                       |               |
|----|---|-------------------------------------------------------|---------------|
| 37 | 1 | Retail Analytics: Understanding Customer              |               |
| 38 | 1 | Profiling and Segmentation                            | Chalk & Talk  |
| 39 | 1 | Modelling Churn                                       | Chalk & Talk  |
| 40 | 1 | Modelling Lifetime Value                              | Chalk & Talk  |
| 41 | 1 | Modelling Risk                                        | Chalk & Talk  |
| 42 | 1 | Market Basket Analysis                                | Chalk & Talk  |
| 43 | 1 | Risk Analytics                                        | Chalk & Talk  |
| 44 | 1 | Risk Management and Operational Hedging An Overview   | Chalk & Talk  |
| 45 | 1 | Supply Chain Risk Management                          |               |
| 46 | 1 | A Bayesian Framework for Supply Chain Risk Management | PPT           |
| 47 | 1 | Credit Scoring                                        | Chalk & Talk  |
| 48 | 1 | Bankruptcy Prediction                                 | Chalk & Talk  |
| 49 | 1 | Financial Data Analytics                              | Chalk & Talk  |
| 50 | 1 | Financial News analytics                              | PPT           |
| 51 | 1 | Framework, techniques, and metrics                    | Chalk & Talk  |
| 52 | 1 | News events impact market sentiment                   | Chalk & Talk  |
| 53 | 1 | Relating news analytics to stock returns.             | Flipped Class |
| 54 | 1 | Relating news analytics to stock returns.             | Chalk & Talk  |
|    |   |                                                       | Chalk & Talk  |

### UNIT IV (18 hrs)

|    |   |                                                          |               |
|----|---|----------------------------------------------------------|---------------|
| 55 | 1 | Financial Time Series Analytics                          |               |
| 56 | 1 | Financial Time Series and Their Characteristics          | Chalk & Talk  |
| 57 | 1 | Common Financial Time Series models                      | Chalk & Talk  |
| 58 | 1 | Autoregressive models                                    | Chalk & Talk  |
| 59 | 1 | Autoregressive models                                    | Chalk & Talk  |
| 60 | 1 | Markov chain models                                      | Chalk & Talk  |
| 61 | 1 | Time series models with leading indicators               | PPT           |
| 62 | 1 | Time series models with leading indicators               | Chalk & Talk  |
| 63 | 1 | Long term forecasting                                    | Chalk & Talk  |
| 64 | 1 | Introduction Healthcare Analytics                        | Chalk & Talk  |
| 65 | 1 | An Introduction to Healthcare Data Analytics             | Chalk & Talk  |
| 66 | 1 | An Introduction to Healthcare Data Analytics             | Chalk & Talk  |
| 67 | 1 | Electronic Health Records                                | Chalk & Talk  |
| 68 | 1 | Electronic Health Records                                | Chalk & Talk  |
| 69 | 1 | Privacy-Preserving Data Publishing Methods in Healthcare | Chalk & Talk  |
| 70 | 1 | Privacy-Preserving Data Publishing Methods in Healthcare | Flipped Class |
| 71 | 1 | Clinical Decision Support Systems.                       | Flipped Class |
| 72 | 1 | Clinical Decision Support Systems.                       | Chalk & Talk  |
|    |   |                                                          | Chalk & Talk  |

| UNIT V (18 hrs) |   |                                                               |               |
|-----------------|---|---------------------------------------------------------------|---------------|
| 73              | 1 | Healthcare Data Analytics                                     | Chalk & Talk  |
| 74              | 1 | Natural Language Processing and Data Mining for Clinical Text | Chalk & Talk  |
| 75              | 1 | Core NLP Components                                           | PPT           |
| 76              | 1 | Information Extraction and Named Entity Recognition           | Chalk & Talk  |
| 77              | 1 | Information Extraction and Named Entity Recognition           | Chalk & Talk  |
| 78              | 1 | Social Media Analytics for Healthcare                         | Flipped Class |
| 79              | 1 | Tracking of Infectious Disease Outbreaks                      | Chalk & Talk  |
| 80              | 1 | Tracking of Infectious Disease Outbreaks                      | Chalk & Talk  |
| 81              | 1 | Readmission risk Prediction                                   | Chalk & Talk  |
| 82              | 1 | Readmission risk Prediction                                   | Chalk & Talk  |
| 83              | 1 | Genomic Data Analytics                                        | Chalk & Talk  |
| 84              | 1 | Microarray Data                                               | Chalk & Talk  |
| 85              | 1 | Microarray Data Analysis                                      | Chalk & Talk  |
| 86              | 1 | Microarray Data Analysis                                      | Chalk & Talk  |
| 87              | 1 | Genomic Data Analysis for Personalized Medicine               | Chalk & Talk  |
| 88              | 1 | Patient Survival Prediction from Gene Expression Data         | Chalk & Talk  |
| 89              | 1 | Genome Sequence Analysis                                      | Chalk & Talk  |
| 90              | 1 | Genome Sequence Analysis                                      | Chalk & Talk  |



Signature of the Staff

(Dr.S.Nithya)



Signature of the HoD

(Dr.L.Kathirvel Kumaran)

# **KONGUNADU ARTS AND SCIENCE COLLEGE(AUTONOMOUS)**

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## **LESSON PLAN**

**Department of Computer Science with Data Analytics**

**Batch : 2021 - 2024**

**Semester : III (ODD)**

**Name of the Staff : Dr.S.Nithya**

**Name of the Subject: Data Manipulation Using Advanced Excel Laboratory**

**(21UDA3CP)**

| <b>Prg.NO.</b> | <b>HOUR</b> | <b>Program / Concept</b>                                                                                                                                                            | <b>MODE OF INSTRUCTIONS/DELIVERY<br/>(CHALK &amp; TALK/PPT/FLIPPED CLASS etc</b> |
|----------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| 1              | 1           | Perform the following basic operations in Worksheet, Row, Column Moving on Worksheet, Enter Data, Select Data, Delete Data ,Move Data, Copy Paste Data, Spell Check ,Insert Symbols | Lab, Discussion, Demonstration                                                   |
| 2              | 1           | Perform the following basic operations in Worksheet, Row, Column Moving on Worksheet, Enter Data, Select Data, Delete Data ,Move Data, Copy Paste Data, Spell Check ,Insert Symbols | Lab, Discussion, Demonstration                                                   |
| 3              | 1           | Perform the following basic operations in Worksheet, Row, Column Moving on Worksheet, Enter Data, Select Data, Delete Data ,Move Data, Copy Paste Data, Spell Check ,Insert Symbols | Lab, Discussion, Demonstration                                                   |
| 4              | 1           | Perform the various Excel Fill Handle in Excel                                                                                                                                      | Lab, Demonstration                                                               |
| 5              | 1           | Perform the various Excel Fill Handle in Excel                                                                                                                                      | Lab, Demonstration                                                               |
| 6              | 1           | Create a Excel program to Perform various Arithmetic Operations                                                                                                                     | Lab, Discussion, Demonstration                                                   |
| 7              | 1           | Create a Excel program to Perform various Arithmetic Operations                                                                                                                     | Lab, Discussion, Demonstration                                                   |
| 8              | 1           | Create a Excel program to Perform various Arithmetic Operations                                                                                                                     | Lab, Discussion, Demonstration                                                   |
| 9              | 1           | Create a Excel program to Perform Data Validation in Excel like Filters, Grouping, Sorting                                                                                          | Lab, Demonstration                                                               |
| 10             | 1           | Create a Excel program to Perform Data Validation in Excel like Filters, Grouping, Sorting                                                                                          | Lab, Demonstration                                                               |
| 11             | 1           | Create a Excel program to Perform Data Validation in Excel like Filters, Grouping, Sorting                                                                                          | Lab, Demonstration                                                               |
| 12             | 1           | Create a Excel program to Perform Data Validation in Excel like Filters, Grouping, Sorting                                                                                          | Lab, Demonstration                                                               |
| 13             | 1           | Create an Excel program to Perform Various Excel Formulas.                                                                                                                          | Flipped Class                                                                    |
| 14             | 1           | Create an Excel program to Perform Various                                                                                                                                          | Flipped Class                                                                    |

|    |   |                                                                         |                                |
|----|---|-------------------------------------------------------------------------|--------------------------------|
|    |   | Excel Formulas.                                                         |                                |
| 15 | 1 | Create an Excel program to Perform Various Excel Formulas.              | Flipped Class                  |
| 16 | 1 | Create a Excel program to Perform Various built in functions in Excel   | Flipped Class                  |
| 17 | 1 | Create a Excel program to Perform Various built in functions in Excel   | Lab, Discussion, Demonstration |
| 18 | 1 | Create a Excel program to Perform Various built in functions in Excel   | Lab, Discussion, Demonstration |
| 19 | 1 | To Perform IF and Nested Functions in Excel                             | Lab, Demonstration             |
| 20 | 1 | To Perform IF and Nested Functions in Excel                             | Lab, Demonstration             |
| 21 | 1 | To Perform AND, OR & NOT Logical                                        | Lab, Demonstration             |
| 22 | 1 | To Perform AND, OR & NOT Logical                                        | Lab, Demonstration             |
| 23 | 1 | To Perform AND, OR & NOT Logical                                        | Lab, Demonstration             |
| 24 | 1 | Create Sheet and Charts in Excel to analysis Student Mark of your Class | Lab, Demonstration             |
| 25 | 1 | Create Sheet and Charts in Excel to analysis Student Mark of your Class | Lab, Demonstration             |
| 26 | 1 | Create Sheet and Charts in Excel to analysis Student Mark of your Class | Lab, Demonstration             |
| 27 | 1 | Import XML to Excel File and do basic Operations                        | Lab, Demonstration             |
| 28 | 1 | To perform Excel VLOOKUP basic Operations                               | Lab, Demonstration             |
| 29 | 1 | To perform Excel VLOOKUP basic Operations                               | Lab, Demonstration             |
| 30 | 1 | Find and Remove duplicates value in Excel                               | Lab, Discussion, Demonstration |
| 31 | 1 | To perform Excel to add or remove Hyperlink in Excel of Multiple Sheets | Lab, Discussion, Demonstration |
| 32 | 1 | To perform Excel to add or remove Hyperlink in Excel of Multiple Sheets | Lab, Discussion, Demonstration |
| 33 | 1 | Use different Freeze panes in Excel                                     | Lab, Discussion, Demonstration |
| 34 | 1 | To Perform Mail merge from Excel to Word                                | Flipped Class                  |
| 35 | 1 | To Perform Mail merge from Excel to Word                                | Flipped Class                  |
| 36 | 1 | To Perform Various Separate text Operations in Excel                    | Lab, Discussion, Demonstration |
| 37 | 1 | To Perform Various Separate text Operations in Excel                    | Lab, Discussion, Demonstration |
| 38 | 1 | To Perform Various Separate text Operations in Excel                    | Lab, Discussion, Demonstration |
| 39 | 1 | To compute various Excel Substring formula                              | Lab, Discussion, Demonstration |
| 40 | 1 | To compute various Excel Substring formula                              | Lab, Discussion, Demonstration |
| 41 | 1 | To compute various Excel Substring formula                              | Lab, Discussion,               |

|    |   |                                                    |                                |
|----|---|----------------------------------------------------|--------------------------------|
| 42 | 1 | To compute add/remove Password from Excel          | Demonstration                  |
| 43 | 1 | To perform various Conditional formatting in Excel | Lab, Discussion, Demonstration |
| 44 | 1 | To perform various Conditional formatting in Excel | Lab, Discussion, Demonstration |
| 45 | 1 | To perform various Conditional formatting in Excel | Lab, Discussion, Demonstration |



Signature of the Staff

(Dr. S. Nithya)



Signature of the HoD

(Dr. L. Kathirvel Kumaran)

# **KONGUNADU ARTS AND SCIENCE COLLEGE(AUTONOMOUS)**

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## **LESSON PLAN**

**Department of Computer Science with Data Analytics**

**Batch : 2021 - 2024**

**Semester : III (ODD)**

**Name of the Staff : Dr.S.Narmadha**

**Name of the Subject: Cyber Security (21UDA3S1)**

| S.NO                    | HOUR | PORTIONS TO BE COVERED                                                     | MODE OF INSTRUCTIONS/DELIVERY (CHALK & TALK/PPT/FLIPPED CLASS etc |
|-------------------------|------|----------------------------------------------------------------------------|-------------------------------------------------------------------|
| <b>Unit I (6 hrs)</b>   |      |                                                                            |                                                                   |
| 1                       | 1    | Introduction -Computer Security                                            | Chalk & Talk                                                      |
| 2                       | 1    | Threats -Harm, Vulnerabilities                                             | Chalk & Talk                                                      |
| 3                       | 1    | Controls – AuthenticationAccess Control and Cryptography                   | Chalk & Talk                                                      |
| 4                       | 1    | Web-User Side - Browser Attacks                                            | Flipped Class                                                     |
| 5                       | 1    | Web Attacks- Targeting Users - Obtaining User or Website Data              | Chalk & Talk                                                      |
| 6                       | 1    | Email Attacks                                                              | Chalk & Talk                                                      |
| <b>UNIT II (6 hrs)</b>  |      |                                                                            |                                                                   |
| 7                       | 1    | Security in Operating Systems, Security in the Design of Operating Systems | Chalk & Talk                                                      |
| 8                       | 1    | Rootkit , Network security attack                                          | Chalk & Talk                                                      |
| 9                       | 1    | Threats to Network Communications                                          | Chalk & Talk                                                      |
| 10                      | 1    | Wireless Network Security, Denial of Service                               | Chalk & Talk                                                      |
| 11                      | 1    | Denial of Service                                                          | PPT                                                               |
| 12                      | 1    | Distributed Denial-of service                                              | Chalk & Talk                                                      |
| <b>UNIT-III (6 hrs)</b> |      |                                                                            |                                                                   |
| 13                      | 1    | Cryptography in Network Security                                           | Chalk & Talk                                                      |
| 14                      | 1    | Firewalls                                                                  | Chalk & Talk                                                      |
| 15                      | 1    | Intrusion Detection and Prevention Systems                                 | Chalk & Talk                                                      |
| 16                      | 1    | Network Management, Databases                                              | Chalk & Talk                                                      |
| 17                      | 1    | Security Requirements of Databases, Reliability and Integrity              | Chalk & Talk                                                      |
| 18                      | 1    | Database Disclosure, Data Mining and Big Data                              | Chalk & Talk                                                      |
| <b>UNIT IV (6 hrs)</b>  |      |                                                                            |                                                                   |
| 19                      | 1    | Privacy Concepts, Privacy Principles and Policies                          | Chalk & Talk                                                      |
| 20                      | 1    | Authentication and Privacy                                                 | Chalk & Talk                                                      |
| 21                      | 1    | Data Mining                                                                | Chalk & Talk                                                      |
| 22                      | 1    | Privacy on the Web                                                         | PPT                                                               |
| 23                      | 1    | Email Security                                                             | Chalk & Talk                                                      |
| 24                      | 1    | Privacy Impacts of Emerging Technologies                                   | Chalk & Talk                                                      |
| <b>UNIT V (6 hrs)</b>   |      |                                                                            |                                                                   |
| 25                      | 1    | Security Planning - Business Continuity Planning                           | Chalk & Talk                                                      |
| 26                      | 1    | Handling Incidents, Risk Analysis, Dealing with Disaster                   | Chalk & Talk                                                      |
| 27                      | 1    | Emerging Technologies, The Internet of Things, Economics                   | Chalk & Talk                                                      |
| 28                      | 1    | The Internet of Things, Economics, Electronic Voting                       | Chalk & Talk                                                      |

|    |   |                                                            |              |
|----|---|------------------------------------------------------------|--------------|
| 29 | 1 | Cyber Warfare, Cyberspace and the Law - International Laws | Chalk & Talk |
| 30 | 1 | Cybercrime, Cyber Warfare and Home Land Security           | Chalk & Talk |



Signature of the Staff

(Dr.S.Narmadha)



Signature of the HoD

(Dr.L.Kathirvel Kumaran)

# **KONGUNADU ARTS AND SCIENCE COLLEGE(AUTONOMOUS)**

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## **LESSON PLAN**

**Department of Computer Science with Data Analytics**

**Batch : 2021 - 2024**

**Semester : III (ODD)**

**Name of the Staff : Dr.S.Narmadha**

**Name of the Subject: Big Data Science and Data Analytics (21UDA305)**

| S.NO                     | HOUR | PORTIONS TO BE COVERED                                                               | MODE OF INSTRUCTIONS/DELIVERY (CHALK & TALK/PPT/FLIPPED CLASS etc |
|--------------------------|------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| <b>Unit I (15 hrs)</b>   |      |                                                                                      |                                                                   |
| 1                        | 1    | Introduction to Big Data Platform                                                    | Chalk & Talk                                                      |
| 2                        | 1    | Challenges of Conventional Systems                                                   | Chalk & Talk                                                      |
| 3                        | 1    | Intelligent data analysis                                                            | Chalk & Talk                                                      |
| 4                        | 1    | Nature of Data                                                                       | Chalk & Talk                                                      |
| 5                        | 1    | Analytic Processes and Tools                                                         | Chalk & Talk                                                      |
| 6                        | 1    | Analysis vs Reporting                                                                | Chalk & Talk                                                      |
| 7                        | 1    | Data Science Components: Data Engineering                                            | Chalk & Talk                                                      |
| 8                        | 1    | Data Analytics- Methods and Algorithm                                                | Chalk & Talk                                                      |
| 9                        | 1    | Data Analytics- Methods and Algorithm                                                | Chalk & Talk                                                      |
| 10                       | 1    | Data Visualization                                                                   | Flipped Class                                                     |
| 11                       | 1    | Evolution of Big Data                                                                | Chalk & Talk                                                      |
| 12                       | 1    | Sources of Big Data                                                                  | Chalk & Talk                                                      |
| 13                       | 1    | Characteristics of Big Data                                                          | Chalk & Talk                                                      |
| 14                       | 1    | 6Vs in Big Data                                                                      | Chalk & Talk                                                      |
| 15                       | 1    | 6Vs in Big Data                                                                      | Chalk & Talk                                                      |
| <b>UNIT II (15 hrs)</b>  |      |                                                                                      |                                                                   |
| 16                       | 1    | Mining data streams: Introduction to Streams Concepts, Stream Model and Architecture | Chalk & Talk                                                      |
| 17                       | 1    | Stream Computing, Sampling Data in a Stream                                          | Chalk & Talk                                                      |
| 18                       | 1    | Filtering Streams, Counting Distinct Elements in a Stream                            | Chalk & Talk                                                      |
| 19                       | 1    | Estimating Moments                                                                   | Chalk & Talk                                                      |
| 20                       | 1    | Counting Oneness in a Window                                                         | Chalk & Talk                                                      |
| 21                       | 1    | Decaying Window                                                                      | Chalk & Talk                                                      |
| 22                       | 1    | Real time Analytics Platform Application                                             | PPT                                                               |
| 23                       | 1    | Real Time Sentiment Analysis                                                         | Chalk & Talk                                                      |
| 24                       | 1    | Stock Market Predictions                                                             | Chalk & Talk                                                      |
| 25                       | 1    | Sources of Data: Time Series                                                         | Chalk & Talk                                                      |
| 26                       | 1    | Transactional Data, Biological Data, Spatial Data                                    | Chalk & Talk                                                      |
| 27                       | 1    | Social Network Data , Data Evolution                                                 | Chalk & Talk                                                      |
| 28                       | 1    | Data Sources                                                                         | Chalk & Talk                                                      |
| 29                       | 1    | Data Science: Data Science-A Discipline – Data Science vs Statistics                 | Chalk & Talk                                                      |
| 30                       | 1    | Data Analytics Relation: Data Science, Analytics, Big Data Analytics                 | Chalk & Talk                                                      |
| <b>UNIT-III (15 hrs)</b> |      |                                                                                      |                                                                   |
| 31                       | 1    | History of Hadoop, the Hadoop Distributed                                            | Chalk & Talk                                                      |

|                        |   |                                                         |              |
|------------------------|---|---------------------------------------------------------|--------------|
|                        |   | File System                                             |              |
| 32                     | 1 | Components of Hadoop Analyzing the Data with Hadoop     | Chalk & Talk |
| 33                     | 1 | Scaling Out                                             | Chalk & Talk |
| 34                     | 1 | Hadoop Streaming                                        | Chalk & Talk |
| 35                     | 1 | Design of HDFS                                          | Chalk & Talk |
| 36                     | 1 | Java interfaces to HDFS Basics                          | PPT          |
| 37                     | 1 | Developing a Map Reduce Application                     | Chalk & Talk |
| 38                     | 1 | How Map Reduce Works                                    | Chalk & Talk |
| 39                     | 1 | Anatomy of a Map Reduce Job run-                        | Chalk & Talk |
| 40                     | 1 | Failures-Job Scheduling                                 | Chalk & Talk |
| 41                     | 1 | Shuffle and Sort                                        | Chalk & Talk |
| 42                     | 1 | Task execution                                          | Chalk & Talk |
| 43                     | 1 | Map Reduce Types and Formats-                           | Chalk & Talk |
| 44                     | 1 | Map Reduce Features                                     | Chalk & Talk |
| 45                     | 1 | Hadoop environment                                      | Chalk & Talk |
| <b>UNIT IV (15hrs)</b> |   |                                                         |              |
| 46                     | 1 | Frameworks: Applications on Big Data Using Pig and Hive | Chalk & Talk |
| 47                     | 1 | Frameworks: Applications on Big Data Using Pig and Hive | Chalk & Talk |
| 48                     | 1 | Data processing operators in Pig                        | Chalk & Talk |
| 49                     | 1 | Data processing operators in Pig                        | PPT          |
| 50                     | 1 | Data processing operators in Pig                        | Chalk & Talk |
| 51                     | 1 | Hive services                                           | Chalk & Talk |
| 52                     | 1 | Hive services                                           | Chalk & Talk |
| 53                     | 1 | Hive SQL                                                | Chalk & Talk |
| 54                     | 1 | Hive SQL                                                | Chalk & Talk |
| 55                     | 1 | Querying Data in Hive                                   | Chalk & Talk |
| 56                     | 1 | Fundamentals of H                                       | PPT          |
| 57                     | 1 | Fundamentals of H                                       | Chalk & Talk |
| 58                     | 1 | Base and Zookeeper                                      | Chalk & Talk |
| 59                     | 1 | IBM Info sphere                                         | Chalk & Talk |
| 60                     | 1 | Big Insights and Streams                                | Chalk & Talk |
| <b>UNIT V (15 hrs)</b> |   |                                                         |              |
| 61                     | 1 | Predictive Analytics                                    | Chalk & Talk |
| 62                     | 1 | Simple linear regression                                | Chalk & Talk |
| 63                     | 1 | Multiple linear regression                              | Chalk & Talk |
| 64                     | 1 | Multiple linear regression                              | Chalk & Talk |
| 65                     | 1 | Interpretation of regression coefficients               | Chalk & Talk |
| 66                     | 1 | Visualizations                                          | Chalk & Talk |
| 67                     | 1 | Visual data analysis techniques                         | Chalk & Talk |
| 68                     | 1 | Visual data analysis techniques                         | Chalk & Talk |
| 69                     | 1 | interaction techniques                                  | Chalk & Talk |
| 70                     | 1 | Systems and applications                                | Chalk & Talk |
| 71                     | 1 | Systems and applications                                | Chalk & Talk |

|    |   |                                |              |
|----|---|--------------------------------|--------------|
| 72 | 1 | Machine Learning: Introduction | PPT          |
| 73 | 1 | Supervised Learning            | PPT          |
| 74 | 1 | Unsupervised Learning          | Chalk & Talk |
| 75 | 1 | Collaborative Filtering        | Chalk & Talk |



Signature of the Staff

(Dr.S.Narmadha)



Signature of the HoD

(Dr.L.Kathirvel Kumaran)

# KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), COIMBATORE - 29.

## ACADEMIC PLANNING

Department : B.Sc. CS with DA

Name of the Teacher : Dr. S. NITHYA

Year 2022 - 2023

Title of the Paper : Web and Social Media Analytics Subject Code : 21UDAAAH

Semester : ODD / EVEN

| Test No. & Period                           | Topics allotted                                                                                                                                                                                                                                                                                                        | No. of hours required for completion | Dates & hrs of handling                                          | Topics not covered, if any | Signature of |     |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------------------------------------|----------------------------|--------------|-----|
|                                             |                                                                                                                                                                                                                                                                                                                        |                                      |                                                                  |                            | Staff        | HOD |
| I<br>From : 02/01/2023<br>To : 1st - 2nd hr | Unit-I<br>Introduction, Key terms, Building block terms, Categories, web analytics platform, Data collection, Online Data, Research Data, Competitive Data : Panel based Measurement, ISP-based Measurement, Search Engine data.                                                                                       | 18 hours                             | 02/01/2023<br>2nd hr - 1st hr<br>25/01/2023<br>11-12<br>(18 hrs) | —                          | ed           |     |
| II<br>From :<br>To :                        | UNIT-II<br>Qualitative analysis: Heuristic evaluation: Conducting a heuristic Evaluation, Site Visit, Surveys, web analytic fundamentals, Capturing data, Type and size of data, Innovation, Integration, selecting web analytical tool, Click stream Data, Unique page definition, Using cookies, Link coding survey. | 18 hours                             | 07/01/2023<br>1st hr to 2nd hr<br>28/12/2023<br>1st hr to 2nd hr | —                          | ed           |     |

# KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), COIMBATORE - 29.

## ACADEMIC PLANNING

Department : B.Sc. CS with DE

Name of the Teacher : Dr. S. Nithya

Year 2022 - 2023

Title of the Paper : Web & Social Mktg Analytics Subject Code : 24UD04A4

Semester : ODD / EVEN

| Test No. & Period | Topics allotted                                                                                                                                                                                                                                                                                         | No. of hours required for completion | Dates & hrs of handling                                      | Topics not covered, if any | Signature of         |  |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------------------------------------------------------------|----------------------------|----------------------|--|
| I                 | UNIT - III<br>Web Metrics, Common Metrics, Optimization, Improving bounce rates, Optimizing ad words campaigns, Real-time report, Google analytics, Introduction to KPI, Relevant Technologies, Client/Server computing HTTP, Server log files & cookies, Web Bugs.                                     | 18 hours                             | 28/12/2023<br>I-Do-3rd hr<br>to<br>20/3/2023<br>II-Do-1st hr | -                          | <u>Dr. S. Nithya</u> |  |
| To:               | UNIT - IV<br>Introduction to Social Media Analytics, SMTA in Small Organizations, Application of SMTA, The Social                                                                                                                                                                                       |                                      | 21-3-2023<br>4Do-4th hr<br>5-4-2023                          |                            |                      |  |
| From:             | networks perspective, Graphs & Metrics, Information Visualization, Making connections, Social context, web analytics tools, Natural language Processing techniques                                                                                                                                      |                                      | II-Do-4th hr                                                 |                            |                      |  |
| II                | UNIT - V<br>Facebook analytics, Reach & Engagement analysis, Social campaigns, Network analysis, Google analytics, Categories of traffic, Google website optimizer, Privacy issues, Reviewing & visualizing, applications in advertising, Python Programming, collecting & analyzing social media data. |                                      | 8-4-2023<br>I-Do-4th hr<br>to<br>20-4-2023<br>II-Do-2nd hr   |                            | <u>Dr. S. Nithya</u> |  |
| To:               |                                                                                                                                                                                                                                                                                                         |                                      |                                                              |                            |                      |  |

# KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), COIMBATORE - 29.

## ACADEMIC PLANNING

Department : IT, B.Sc. CS with DA

Name of the Teacher : Mrs. P. Sureshitha

Year 2022 - 2023

Title of the Paper : Relational Database Management System

Subject Code : 21.VDA4457

Semester : ODD / EVEN ✓

| Test No. & Period | Topics allotted                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No. of hours required for completion | Dates & hrs of handling                                 | Topics not covered, if any | Signature of |      |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|---------------------------------------------------------|----------------------------|--------------|------|
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                      |                                                         |                            | Staff        | HOD  |
| I                 | <u>Unit 1</u><br>Introduction to Database Management System - Introduction - History of Information - Quality of Information - Information Processing - Database - Characteristics of data in database - DBMS - types of DBMS Relational Database Management system - RDBMS Terminology - Relational Data Structures - Relational Data Integrity - Relational Data Manipulation Codd's Rules. History of SQL - Characteristics of SQL Types of SQL Commands - DDL - DML - DCL - DAs - Tcs Arithmetic Comparison and logical operators | 15 hours                             | 2.1.1.2023<br>5th IDo<br>to<br>23.1.2023<br>14Do 4th    | —                          | P.S.         | 14th |
| II                | <u>Unit 2</u><br>Data Normalization (1NF, 2NF, 3NF, BCNF and 4NF) ER Modeling - Introduction - Components of ER Model - ER Diagrams - Relational Data Integrity and Database Constraints - Transforming - ER Model to Relations - Foreign keys - Mapping ER Model - Mapping Relationships - Aggregate functions.                                                                                                                                                                                                                      | 15 hours                             | 24.1.23<br>14Do 1st hr<br>to<br>9.2.2023<br>14Do 1st hr | —                          | P.S.         | 14th |
| To:               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                      |                                                         |                            |              |      |

# KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), COIMBATORE - 29.

## ACADEMIC PLANNING

Department : U. B.S.C. C.S. with DA

Name of the Teacher : Mrs. P. Sumithra

Year 2022 - 2023

Title of the Paper : Relational Database Management System Subject Code : 210DA007

Semester : ODD / EVEN ✓

| Test No. & Period | Topics allotted                                                                                                                                                                                                                                                                                                                                       | No. of hours required for completion | Dates & hrs of handling                                                                                                             | Topics not covered, if any | Signature of |  |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------|--|
| I                 | Unit 3:<br>Queries and subqueries - joins: Theta joins - Equi joins and Non-equi joins - Where clause<br>Natural joins - Self joins<br>Unit 4:<br>Basics of PL/SQL - Usage of stored functions and Procedures - Packages-Exception handling. Triggers- Types of Triggers - Combination of Triggers - Rolling and Purging Triggers - Views - Synonyms. | 15 hours                             | 10.2.2023<br>to<br>11.03.2023<br>11.03.2023<br>to<br>14.03.2023<br>14.03.2023<br>to<br>25.03.2023<br>25.03.2023<br>to<br>28.03.2023 | —                          | P. Sumithra  |  |
| II                | Unit 5:<br>Introduction to modern Database: Distributed Database Object oriented DB - Object relational DB - Relational DB - Productive DB - Multidimensional DB - Parallel DB - Temporal DB - Spatial DB - Multimedia DB - Web DB Distributed DB - Components of distributed DB. SQL Database and * NoSQL Database.                                  | 15 hours                             | 1.04.2023<br>to<br>11.04.2023<br>11.04.2023<br>to<br>20.04.2023<br>20.04.2023<br>to<br>28.04.2023                                   | —                          | P. Sumithra  |  |

**KONGUNADU ARTS AND SCIENCE COLLEGE(AUTONOMOUS)**

**Re-Accredited by NAAC with 'A+' Grade (4<sup>th</sup> Cycle)**

**College of Excellence awarded by UGC**

**Coimbatore – 641 029.**



## **LESSON PLAN**

**Department of Computer Science with Data Analytics**

**Batch: 2022 - 2025**

**Semester: I (ODD)**

**Name of the Staff: P. Sumitha**

**Name of the Subject: Environmental studies [22EVS101]**

| S.NO                    | HOUR | PORTIONS TO BE COVERED                                                                                                                                                                            | MODE OF INSTRUCTIONS/DELIVERY (CHALK & TALK/PPT/FLIPPED CLASS etc |
|-------------------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| <b>Unit I (6hrs)</b>    |      |                                                                                                                                                                                                   |                                                                   |
| 1                       | 1    | Definition: scope and importance –                                                                                                                                                                | Chalk & Talk                                                      |
| 2                       | 1    | Need for public awareness –                                                                                                                                                                       | Chalk & Talk                                                      |
| 3                       | 1    | Natural resources – Types of resources –                                                                                                                                                          | Chalk & Talk                                                      |
| 4                       | 1    | Forest Resources – Water Resources –                                                                                                                                                              | Chalk & Talk                                                      |
| 5                       | 1    | Mineral Resources – Food Resources –                                                                                                                                                              | Chalk & Talk                                                      |
| 6                       | 1    | Energy Resources – Land Resources.                                                                                                                                                                | Flipped Class                                                     |
| <b>UNIT-II (6 hrs)</b>  |      |                                                                                                                                                                                                   |                                                                   |
| 7                       | 1    | Concept of an ecosystem –<br>Structure and functions of an ecosystem –                                                                                                                            | PPT                                                               |
| 8                       | 1    | Energy flow in the ecosystem –                                                                                                                                                                    | Chalk & Talk                                                      |
| 9                       | 1    | Ecological succession –                                                                                                                                                                           | Chalk & Talk                                                      |
| 10                      | 1    | Food chains, food web and ecological pyramids –                                                                                                                                                   | Chalk & Talk                                                      |
| 11                      | 1    | Structure and function of the following ecosystem -Forest Ecosystem –<br>Grassland Ecosystem                                                                                                      | Chalk & Talk                                                      |
| 12                      | 1    | Desert Ecosystem –Aquatic Ecosystem.                                                                                                                                                              | Chalk & Talk                                                      |
| <b>UNIT-III (6 hrs)</b> |      |                                                                                                                                                                                                   |                                                                   |
| 13                      | 1    | Introduction BIODIVERSITY AND ITS CONSERVATION – Definition –<br>Genetic –Species and ecosystem diversity                                                                                         | Chalk & Talk                                                      |
| 14                      | 1    | Bio geographical classification of India                                                                                                                                                          | Chalk & Talk                                                      |
| 15                      | 1    | Value of biodiversity – Biodiversity at global, national and local levels –                                                                                                                       | Chalk & Talk                                                      |
| 16                      | 1    | India as a mega – diversity Nation – Hot spot of biodiversity –                                                                                                                                   | Chalk & Talk                                                      |
| 17                      | 1    | Threats to biodiversity - Endangered and endemic species of India –                                                                                                                               | Chalk & Talk                                                      |
| 18                      | 1    | Conservation of Biodiversity – Insitu<br>Conservation of Biodiversity – Exsitu<br>Conservation of Biodiversity                                                                                    | Chalk & Talk                                                      |
| <b>UNIT IV (6 hrs)</b>  |      |                                                                                                                                                                                                   |                                                                   |
| 19                      | 1    | Definition - Causes, effects and control measures of: Air Pollution – Water Pollution – Soil Pollution – Marine Pollution – Noise Pollution – Thermal Pollution – Nuclear Pollution – Solid Waste | Chalk & Talk                                                      |
| 20                      | 1    | Management: Causes, effects, control measures of urban and industrial wastes                                                                                                                      | Chalk & Talk                                                      |
| 21                      | 1    | Role of individual in prevention of pollution                                                                                                                                                     | Chalk & Talk                                                      |
| 22                      | 1    | Pollution case studies – domestic waste                                                                                                                                                           | Chalk & Talk                                                      |

|                        |   |                                                                                                                                                                                                                      |               |
|------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
|                        |   | water                                                                                                                                                                                                                |               |
| 23                     | 1 | Effluent from paper mill and dyeing, cement pollution                                                                                                                                                                | Chalk & Talk  |
| 24                     | 1 | Disaster Management – Food, Drought, Earthquake, Tsunami, Cyclone and Landslide                                                                                                                                      | PPT           |
| <b>UNIT V (18 hrs)</b> |   |                                                                                                                                                                                                                      |               |
| 25                     | 1 | Sustainable Development – Smart City, Urban planning, Town Planning, Urban problems related to energy                                                                                                                | Chalk & Talk  |
| 26                     | 1 | Water Conservation: Rain Water Harvesting and Watershed Management – Resettlement and rehabilitation of people, its problems and concerns, case studies Narmatha Valley Project – Environmental ethics,              | Chalk & Talk  |
| 27                     | 1 | Issues and possible solutions – Climate change, global warming, ozone layer depletion, acid rain, nuclear accidents and holocaust, case studies – Hiroshima and Nagasaki, Chernobyl – Consumerism and waste products | PPT           |
| 28                     | 1 | Environmental Protection Act – Air Pollution Act (Prevention and Control) – Water Pollution Act (Prevention and control) – Wild Life Protection Act – Forest Conservation Act                                        | Chalk & Talk  |
| 29                     | 1 | Issues involved in enforcement of environmental legislation – Public awareness – Human Population and the environment – Population Growth and Distribution – Population Explosion – Family Welfare Programme         | Chalk & Talk  |
| 30                     | 1 | Environment and Human Health – Human Rights – Value Education – HIV/ AIDS – Women and Child Welfare – Role of Information Technology in Environment and Human Health.                                                | Flipped Class |

  
Signature of the Staff

(Mrs.P.Sumitha)

  
Signature of the HoD

(Dr.L.Kathirvel Kumaran)