

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE

COURSE CODE: 19UECSC2

COURSE NAME: Relational Database Management Systems

SEMESTER NO: V

STAFF NAME: Dr A Murugan

WEEK	TOPICS TO BE COVERED
Week-1	Introduction: Database System-Characteristics of Database Management Systems - DBMS Vs. File System – Advantages of DBMS
Week-2	Architecture of Database Management Systems -Database Models - Entity Relationship Model.
Week-3	Relational Database Model: Structure of Relational Model-Types of keys. Relational Algebra: Unary operations
Week-4	Set operations - Join operations. Normalization: Functional Dependency - First Normal form
Week-5	Second Normal Form - Third Normal form - Boyce-Codd Normal Form - Fourth Normal Form
Week-6	SQL: Introduction. Data Definition Language, Data Manipulation Language, Data Retrieval: Select statement, Transaction Control Language
Week-7	Single row functions using dual: Date, Numeric and Character functions. Group/Aggregate functions, Set Functions
Week-8	Defining Constraints: Primary Key, Foreign Key, Unique, Check, Not Null.
Week-9	PL/SQL: Introduction-PL/SQL Basic-Character Set- PL/SQL Structure – Simple PL/SQL programs
Week-10	SQL Cursor Management – Subprograms – Example PL/SQL programs
Week-11	Functions – Procedures – Example PL/SQL programs
Week-12	Exception Handling: Introduction - Predefined Exception
Week-13	User Defined Exception –Triggers - Example PL/SQL programs
Week-14	Implicit and Explicit Cursors - Loops in Explicit Cursor - Example PL/SQL programs
Week-15	Revision on selected important topics

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039**

PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)

DEGREE: B.Sc., COMPUTER SCIENCE

COURSE CODE: 19UECSC3

COURSE NAME: Practical V : SQL and PL/SQL Lab

SEMESTER NO: V

STAFF NAME: Dr A Murugan

WEEK	TOPICS TO BE COVERED
Week-1	Demo on connect SQL to Oracle Database.
Week-2	Data Definition of Base Tables
Week-3	Data Manipulation of Base Tables and Views.
Week-4	DDL with Primary key constraints
Week-5	View creation and updation
Week-6	DML Commands: Insert, Delete and Update of Base Table
Week-7	Demonstrate the Query commands
Week-8	Numeric and Character Functions.
Week-9	Aggregate or Group Functions.
Week-10	Set operations
Week-11	Example PL/SQL programs
Week-12	PL/SQL programs – SB Account
Week-13	PL/SQL programs – Cursor
Week-14	PL/SQL programs – Exception handling
Week-15	PL/SQL programs – Audit system

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: M.Sc., COMPUTER SCIENCE

COURSE CODE:

COURSE NAME: PERSONALITY DEVELOPMENT

SEMESTER NO: III

STAFF NAME: Dr A Murugan

WEEK	TOPICS TO BE COVERED
Week-1	Personality: Definition – Determinants
Week-2	Heredity- Environment-Situation
Week-3	Self Awareness- Benefits of Self-Awareness
Week-4	Enhancing Self-Awareness: Self-analysis
Week-5	Behaviour-Motivation-Modes of thinking
Week-6	Modes of acting - Modes of interacting
Week-7	The “Big Five” Model:-Extroversion- Agreeableness
Week-8	Emotional Stability- Conscientiousness
Week-9	Openness to experience- Self-monitoring
Week-10	Traits For Building Positive Personality
Week-11	Chief traits for building Personality
Week-12	Conscious Programming-Subconscious Programming
Week-13	Personal Grooming:- Men-Dress – Shirts- trousers – Ties – Socks – Shoes –Belts – Watches –Hairstyles
Week-14	Women -Dress – Hair – Shoes /Sandal – Bags– Accessories
Week-15	SWOT Analysis of Students and Revision

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE: M.Sc., COMPUTER SCIENCE

COURSE CODE: 22PBCSE3B

COURSE NAME: **BLOCK CHAIN TECHNOLOGY**

SEMESTER NO: II

STAFF NAME: Dr A Murugan

WEEK	TOPICS TO BE COVERED
Week-1	Introduction to Blockchain : Back story of Blockchain - What is Blockchain? - Centralized vs. Decentralized Systems
Week-2	- Layers of Blockchain - Why is Blockchain Important? Limitations of Centralized Systems
Week-3	Blockchain Uses and Use Cases. How Blockchain Works : Blockchain Foundation - Cryptography
Week-4	Symmetric Key Cryptography - Cryptographic Hash Functions - MAC and HMAC
Week-5	Asymmetric Key Cryptography - Diffie-Hellman Key Exchange - Symmetric vs. Asymmetric Key Cryptography - Game Theory
Week-6	Why to Study Game Theory - The Blockchain - Merkle Trees - Properties of Blockchain Solutions Blockchain Transactions - Distributed Consensus Mechanisms - Blockchain Applications
Week-7	Scaling Blockchain - Off-Chain Computation - Sharding Blockchain State. How Bitcoin Works - The History of Money - Dawn of Bitcoin
Week-8	What Is Bitcoin? - Working with Bitcoins - The Bitcoin Blockchain
Week-9	Block Structure - The Genesis Block
Week-10	The Bitcoin Network - Network Discovery for a New Node - Bitcoin Transactions
Week-11	Consensus and Block Mining - Block Propagation - Bitcoin Scripts
Week-12	Bitcoin Transactions Revisited - Scripts - Full Nodes vs. SPVs - Bitcoin Wallets
Week-13	Block chain for Government : Digital identity, land records and other kinds of record keeping between government entities
Week-14	Public distribution system / social welfare systems
Week-15	Revision and Discussion

Subject-in-Charge

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039**

PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE

HOD

LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)

DEGREE: B.Sc., COMPUTER SCIENCE

COURSE CODE: 22UBCSN2A

COURSE NAME: HTML PROGRAMMING

SEMESTER NO: II

STAFF NAME: Dr A Murugan

WEEK	TOPICS TO BE COVERED
Week-1	History of Internet-WWW-web site-Web page
Week-2	Web browser-Internet Explorer-Netscape Communicator-Information searching.
Week-3	Simple HTML Programs
Week-4	HTML Basic tags-HTML basics-document tags
Week-5	Head and Body sections.
Week-6	Demo HTML Programs for week 4 & week 5
Week-7	Formatting tags-Paragraph and heading tags
Week-8	List types-Ordered and Unordered
Week-9	Demo HTML Programs for week 7 & week 8
Week-10	Hyper link-tags for linking web pages
Week-11	Inserting an image-Image as hyperlink.
Week-12	Demo HTML Programs for week 10 & week 11
Week-13	Table-Table tags- Simple table program
Week-14	Creation of train timetable and class Time table.
Week-15	Revision

Subject-in-Charge

HOD

Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)

DEGREE: B.Sc COMPUTER SCIENCE

COURSE CODE: 19UECSC1

COURSE NAME: OPERATING SYSTEMS

SEMESTER NO:V

STAFF NAME : Dr K.SHYAMALA

WEEK	TOPICS TO BE COVERED
Week-1	Introduction: Views- Goals – Types of System – OS Structure – Components – Services
Week-2	Process Management: Process – Process Scheduling – Cooperating process – Threads – Inter Process Communication
Week-3	CPU Scheduling: CPU Schedulers – Scheduling Criteria – Scheduling Algorithms
Week-4	Process Synchronization: Critical-Section Problem – Synchronization Hardware – Semaphores
Week-5	Classical Problems of Synchronization. Deadlocks: Characterization
Week-6	Methods for Handling Deadlocks – Deadlock Prevention - Avoidance – Detection - Recovery
Week-7	Memory Management: Address Binding – Dynamic Loading and Linking – Overlays – Logical and Physical Address Space
Week-8	Contiguous Allocation – Internal and External Fragmentation.
Week-9	Non-Contiguous Allocation: Paging and Segmentation Schemes – Implementation – Fragmentation
Week-10	Virtual Memory: Demand Paging – Page Replacement – Page Replacement Algorithms
Week-11	File System: File Concepts – Access Methods – Directory Structures
Week-12	File System Structures – Allocation Methods – Free Space Management
Week-13	I/O System: Overview – I/O Hardware – Application I/O Interface – Transforming I/O Requests to Hardware Operations
Week-14	Protection – Goals – Domain – Access matrix – The Security Problem – Authentication
Week-15	Unix System: Features of UNIX - Basic commands

Subject-in-Charge

HOD

Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN

ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)

DEGREE: M.Sc COMPUTER SCIENCE

COURSE CODE: 19UFCSE1A

COURSE NAME: COMPUTER NETWORKS (UNITS II & V)

SEMESTER NO: VI

STAFF NAME : Dr K.SHYAMALA

WEEK	TOPICS TO BE COVERED
Week-1	The Physical Layer : Guided Transmission Media
Week-2	Wireless Transmission
Week-3	Communication Satellites
Week-4	Telephone System: Structure, Local Loop, Trunks
Week-5	Multiplexing
Week-6	Switching
Week-7	Network Layer - Design Issues
Week-8	Routing Algorithms - concept
Week-9	Optimality principle-shortest path algorithm
Week-10	Flooding-Distance vector routing
Week-11	Link state routing-Hierarchical routing
Week-12	Broadcast routing-Multicast routing
Week-13	Congestion control - concepts
Week-14	Congestion Control Algorithms
Week-15	Congestion Control Algorithms

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE**

**LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: M.Sc COMPUTER SCIENCE

COURSE CODE: 22PACSE1B
 COURSE NAME: DATA MINING AND WAREHOUSING
 SEMESTER NO: I
 STAFF NAME : Dr K.SHYAMALA

WEEK	TOPICS TO BE COVERED
Week-1	Introduction: Data mining – Kind of Data – Kinds of Patterns – Major issues in Data mining
Week-2	Data Warehouse - Introduction of Functionalities – Classification
Week-3	Introduction to Data Warehousing – Modeling: Data cube and OLAP
Week-4	Data Preprocessing: Preprocessing the Data – Data cleaning
Week-5	Data Integration, Data reduction
Week-6	Data Transformation and Data discretization
Week-7	Mining Association Rules: Basic Concepts - Frequent item set mining
Week-8	Mining Multilevel associations – Mining Multi dimensional associations
Week-9	Mining Quantitative associative rules – mining rare patterns and negative patterns
Week-10	Classification and Prediction: Introduction – Decision Tree Induction
Week-11	Bayesian Classification – Rule based Classification
Week-12	Classification of Back Propagation. Prediction – Classifier Accuracy.
Week-13	Cluster Analysis: Introduction – Types of Data in Cluster Analysis – Requirements of Cluster analysis
Week-14	Partitioning Methods – Hierarchical Methods
Week-15	Density Based Methods – Data mining applications

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
 CHENNAI- 600039
 PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE**

**LESSON PLAN
 ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE: B.Sc COMPUTER SCIENCE
 COURSE CODE: 22PBCSE2B
 COURSE NAME: SCIENTIFIC COMPUTING METHODS
 SEMESTER NO: II

STAFF NAME : Dr K.SHYAMALA

WEEK	TOPICS TO BE COVERED
Week-1	Introduction to Scientific Computing – Applications - Bisection methods
Week-2	Fixed point Iteration method – Newton Raphson method
Week-3	Graffe's squaring method – Secant method
Week-4	Solution of Simultaneous linear equations – Matrix Inversion method
Week-5	Gauss Elimination – Gauss Jordan methods
Week-6	Gauss Seidel method – Gauss Jacobi iterative methods
Week-7	Newton's divided difference interpolating polynomials – Lagrange's and Hermite's polynomials
Week-8	Newton forward and backward difference formula – Stirling's and Bessel's Central difference formula
Week-9	Numerical differentiation using Newton's forward and backward interpolation formula
Week-10	Numerical integration – Introduction - Trapezoidal rule
Week-11	Simpson's 1/3 and 3/8 rules
Week-12	Double integral using Trapezoidal and Simpson's rules
Week-13	Taylor series method for simultaneous first order and second order differential equations
Week-14	Modified Euler's method – Runge Kutta method for simultaneous differential equations
Week-15	RK second order and fourth order methods

Subject-in-Charge

HOD

DEPARTMENT OF COMPUTER SCIENCE
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
M.Sc.,Degree Programme in Computer Science
Teaching Plan (ODD- Semester (2022-23))

Class : II M.Sc Computer Science Semester:III

Subject Code: 19PCCSC3

Subject Name:Machine Learning

Subject In Charge:Mrs.N.Vanitha

Week	Topics to be Covered
Week-1	Learning Problems – Perspectives and Issues – Concept Learning
Week-2	Version Spaces and Candidate Eliminations – Inductive bias
Week-3	Decision Tree learning – Representation – Algorithm – Heuristic Space Search.

Week-4	Neural networks and genetic algorithms : neural network representation – problems
Week-5	Perceptrons – Multilayer Networks and Back Propagation Algorithms –
Week-6	Advanced Topics – Genetic Algorithms – Hypothesis Space Search – Genetic Programming – Models of Evaluation and Learning.
Week-7	Bayesian and computational learning : bayes theorem – concept learning – maximum likelihood – minimum description length principle – bayes optimal classifier
Week-8	Gibbs algorithm – naïve bayes classifier – bayesian belief network – em algorithm
Week-9	Probability Learning – Sample Complexity – Finite and Infinite Hypothesis Spaces – Mistake Bound Model
Week-10	Instant Based Learning : K- Nearest Neighbour Learning – Locally weighted Regression
Week-11	Radial basis functions – case based learning.
Week-12	Learning Sets of Rules – Sequential Covering Algorithm – Learning Rule Set – First Order Rules – Sets of First Order Rules
Week-13	Induction on Inverted Deduction – Inverting Resolution – Analytical Learning
Week-14	Perfect domain theories – explanation base learning – focl algorithm
Week-15	Reinforcement learning – task – Q-learning – temporal difference learning

Subject-in-Charge

HOD

DEPARTMENT OF COMPUTER SCIENCE
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
M.Sc.,Degree Programme in Computer Science
Teaching Plan (ODD- Semester (2022-23))

Class : II M.Sc Computer ScienceSemester

Semester :III

Subject Code:19PCCSC4

Subject Name:Machine Learning using Python- Lab

Subject In Charge:Mrs.N.Vanitha

Week	Topics to be Covered
Week-1	Intoduction about Basic Input / Output in python,Comments,Variables,Datatype
Week-2	Simple Programs in python

Week-3	Introduction of all libraries in python
Week-4	Demonstrate Scipy library
Week-5	Implement and demonstrate the FIND-S algorithm for finding the most specific hypothesis based on a given set of training data samples. Read the training data from a .CSV file
Week-6	For a given set of training data examples stored in a .CSV file, implement and demonstrate the Candidate-Elimination algorithm to output a description of the set of all hypotheses consistent with the training examples
Week-7	Write a program to demonstrate the working of the decision tree based ID3 algorithm. Use an appropriate data set for building the decision tree and apply this knowledge to classify a new sample.
Week-8	Bayesian Theorem
Week-9	Naive Bayesian
Week-10	Write a program to construct a Bayesian network considering medical data. Use this model to demonstrate the diagnosis of heart patients using standard Heart Disease Data Set.
Week-11	Build an Artificial Neural Network by implementing the Backpropagation algorithm and test the same using appropriate data sets.
Week-12	Write a program to implement k-Nearest Neighbour algorithm to classify the iris data set. Print both correct and wrong predictions.
Week-13	Locally weighted Regression Algorithm.

Subject-in-Charge

HOD

DEPARTMENT OF COMPUTER SCIENCE
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
M.Sc.,Degree Programme in Computer Science
Teaching Plan (ODD- Semester (2022-23))

Class : II M.Sc Computer ScienceSemester Semester :III

Subject Code:19PCSBE3

Subject Name:Managerial Skills

Subject In Charge:Mrs.N.Vanitha

Week	Topics to be Covered
Week-1	Introduction about Time Management, Advantage and Disadvantages
Week-2	Organizational Awareness and it importance
Week-3	Problem Solving, Leadership Qualities, Merits, and demerits
Week-4	Teamwork and office functional rule, Advantage and disadvantages
Week-5	Being knowledgeable of Hierarchy in Office
Week-6	Conducting Interviews and its importance
Week-7	Conducting Meetings and its benefits
Week-8	Writing Circulars and its importance
Week-9	Agendas, Minutes of meetings and Passing resolutions
Week-10	Business Communication and about its importance, Email
Week-11	About Project Proposals, Contracts and its importance
Week-12	Job Application and Curriculum vitae
Week-13	Office Etiquette, Dress Code
Week-14	Communication, Maintaining healthy work relationship
Week-15	Effective use of technology at workplace

Subject-in-Charge

HOD

DEPARTMENT OF COMPUTER SCIENCE
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
M.Sc.,Degree Programme in Computer Science
Teaching Plan (ODD- Semester (2022-23))

Class : IM.Sc Computer Science

Semester:I

Subject Code:22PACSC1

Subject Name:Advanced Java Programming

Subject In Charge:Mrs.N.Vanitha

Week	Topics to be Covered
Week-1	Introduction – Servlet Architecture - Servlet Life Cycle-Generic Servlet
Week-2	Http Servlet-Performing URL redirection-Session Tracking-Cookies
Week-3	Using JDBC in Servlets. Introduction – JDBC Architecture
Week-4	Types of Drivers-Statement- Resultset - Prepared Statement
Week-5	Batch Update - Callable Statement-Creating a New Database and Table with JDBC.
Week-6	Java Beans :Introduction –Advantage of java bean -The Component Model-JavaBeans Architecture-Writing simple beans
Week-7	EJB : EJB Component Model-Need for Enterprise JavaBeans-Enterprise JavaBeansArchitecture-Classification of Enterprise Java bean -Entity Beans
Week-8	Session Bean-Message driven beans and its examples
Week-9	Overview – Developing Applications with RMI: Declaring & Implementing Remote Interfaces.
Week-10	Stubs & Skeletons, Registering Remote Objects, Writing RMI Clients
Week-11	Pushing Data from RMI Servlet and its examples
Week-12	Introduction JSP -JSP Life Cycle- Examining MVC and - Working with Variables
Week-13	JSP - JSP Scripting Elements & Directives.
Week-14	Working with Scopes - Error Pages and Example of JSP programs
Week-15	Using Java Beans in JSP and its Example.

Subject-in-Charge

HOD

DEPARTMENT OF COMPUTER SCIENCE
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
B.Sc.,Degree Programme in Computer Science
Teaching Plan (EVEN- Semester (2022-23))

Class : III B.Sc Computer Science

Semester:VI

Subject Code:19UFCSE1A

Subject Name: Computer Networks(1,3,4)

Subject In Charge:Mrs.N.Vanitha

Week	Topics to be Covered
Week-1	Introduction: “Uses of Computer Networks-Business Applications-Home Applications-Mobile Users-Social issues
Week-2	Network Hardware-Personal area networks-Local area networks-Metropolitan area networks:
Week-3	Wide area networks-internetworks-Network Software- Reference Models
Week-4	OSI and TCP/IP Models,
	Data Link Layer: Design Issues
Week-5	Elementary Data Link Protocols
Week-6	Error Detection and Correction
Week-7	Medium Access Control Sub layer
Week-8	Multiple Access Protocols
Week-9	ALOHA-
Week-10	carrier sense- CSMA
Week-11	CDMA
Week-12	Collision free protocols
Week-13	Limited-contention protocols.

Subject-in-Charge

HOD

DEPARTMENT OF COMPUTER SCIENCE
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
M.Sc.,Degree Programme in Computer Science
Teaching Plan (EVEN- Semester (2022-23))

Class : I M.Sc Computer Science

Semester:II

Subject Code: 22PBCSC1

Subject Name:Machine Learning

Subject In Charge:Mrs.N.Vanitha

Week	Topics to be Covered
Week-1	Designing a learning system - Perspectives and Issues in machine learning - Concept learning task
Week-2	Concept learning as search - Version spaces
Week-3	- Candidate Elimination learning algorithm - Inductive Bias.
Week-4	Decision Tree representation - Appropriate Problems for Decision Tree Learning - Basic Decision tree learning algorithm
Week-5	Hypothesis space search and Inductive Bias in Decision tree learning - Issues in Decision Tree Learning.
Week-6	ANN: Perceptron's - Back propagation Algorithms.
Week-7	Bayes Theorem and Concept learning - Maximum Likelihood and Least Squared error hypothesis -
Week-8	Maximum Likelihood hypotheses for predicting probabilities - Minimum description Length principle
Week-9	-Bayes optimal classifier - Gibbs algorithm - Naïve Bayes classifier - Bayesian Belief networks -EM algorithm
Week-10	Analytical learning - Explanation based learning - Inductive Analytical approaches to learning -
Week-11	Using prior knowledge to initialize the hypothesis, to alter the search objective.
Week-12	K - nearest neighbor learning -Locally weighted regression
Week-13	Radial Basis functions - Case based reasoning - Reinforcement learning: Learning task-
Week-14	-Q Learning: Q function - Algorithm for learning Q-
Week-15	convergence - Temporal difference learning.

Subject-in-Charge

HOD

DEPARTMENT OF COMPUTER SCIENCE
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
M.Sc.,Degree Programme in Computer Science
Teaching Plan (EVEN- Semester (2022-23))

Class : I M.Sc Computer Science Semester:II

Subject Code: 22PBCSC4 Subject Name: Machine Learning using Python- Lab

Subject In Charge: Mrs.N.Vanitha

Week	Topics to be Covered
Week-1	Introduction about Basic Input / Output in python, Comments, Variables, Datatype
Week-2	Simple Programs in python
Week-3	Introduction of all libraries in python
Week-4	Demonstrate SciPy library
Week-5	Implement and demonstrate the FIND-S algorithm for finding the most specific hypothesis based on a given set of training data samples. Read the training data from a .CSV file
Week-6	For a given set of training data examples stored in a .CSV file, implement and demonstrate the Candidate-Elimination algorithm to output a description of the set of all hypotheses consistent with the training examples
Week-7	Write a program to demonstrate the working of the decision tree based ID3 algorithm. Use an appropriate data set for building the decision tree and apply this knowledge to classify a new sample.
Week-8	Bayesian Theorem
Week-9	Naive Bayesian
Week-10	Write a program to construct a Bayesian network considering medical data. Use this model to demonstrate the diagnosis of heart patients using standard Heart Disease Data Set.
Week-11	Build an Artificial Neural Network by implementing the Backpropagation algorithm and test the same using appropriate data sets.
Week-12	Write a program to implement k-Nearest Neighbour algorithm to classify the iris data set. Print both correct and wrong predictions.
Week-13	Locally weighted Regression Algorithm.

Subject-in-Charge

HOD

DEPARTMENT OF COMPUTER SCIENCE
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
B.Sc.COMPUTER SCIENCE
TEACHING PLAN –ODDSEMESTER (2022-2023)

CLASSB.Sc. COMPUTER SCIENCE –I YEAR-SEMESTER I
SUBJECT CODE:22UACSC1SUBJECT NAME: PROGRAMMING IN
PYTHON
SUBJECT IN-CHARGE: B.JAYAPRADHA

WEEK	TOPIC TO BE COVERED
WEEK 1	Basics of Python Programming: History of Python-Features of Python-Literal constants-Variables - Identifiers–Keywords
WEEK 2	Built-in Data types-Output Statements – Input Statements-Comments – Indentation-Operators-Expressions-Type conversions.
WEEK3	Python Arrays: Defining and Processing Arrays – Array methods.
WEEK4	Control Statements:
WEEK5	Iterative Statements: while loop, for loop, else suite in loop and nested loops. Jump Statements: break, continue and pass statements.
WEEK 6	Functions: Function Definition – Function Call – Variable Scope and its lifetime-Return Statement
WEEK 7	FunctionArguments: Required Arguments, Keyword Arguments, Default Arguments and Variable Length Arguments- Recursion.
WEEK 8	Python Strings: String operations- Immutable Strings - Built-in String Methods and Functions -
WEEK 9	String Comparison. Modules: import statement- The Python module – dir() function – Modules and Namespace – Defining our own modules.
WEEK 10	Lists: Creating a list -Access values in list-Updating values in lists- Nested lists -Basic list operations-List Methods
WEEK 11	Tuples: Creating, Accessing, Updating and Deleting Elements in a tuple – Nested tuples– Difference between lists and tuples.
WEEK 12	Dictionaries: Creating, Accessing, Updating and Deleting Elements in a Dictionary
WEEK 13	Dictionary Functions and Methods - Difference between Lists and Dictionaries.
WEEK 14	Python File Handling: Types of files in Python - Opening and Closing files-Reading and Writing files: write() and writelines() methods-
WEEK 15	append() method – read() andreadlines() methods – with keyword – Splitting words – File methods -File Positions- Renaming and deleting files.

Subject-in-Charge

HOD

DEPARTMENT OF COMPUTER SCIENCE
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
B.Sc.COMPUTER SCIENCE
TEACHING PLAN –EVENSEMESTER (2022-2023)

CLASSB.Sc. COMPUTER SCIENCE –III YEAR-SEMESTER VI
SUBJECT CODE:19UFCSC1 SUBJECT NAME: PROGRAMMING IN
PYTHON
SUBJECT IN-CHARGE: B.JAYAPRADHA

WEEK	TOPIC TO BE COVERED
WEEK 1	Introduction to Python and the advantages of Python. Installation procedures and steps in execution of a Python program
WEEK 2	Variables, expressions and statements - Input/ Output statements and Operators.
WEEK3	Conditional statements and functions –arguments and return values
WEEK4	Loops and its types, Strings
WEEK5	Lists, Dictionaries, Tuples, Sequences with example illustrations
WEEK 6	Exception Handling with examples
WEEK 7	File Handling, Modules and Regular Expressions
WEEK 8	Text handling
WEEK 9	Object Oriented Programming - Classes - Objects - Inheritance - Overloading - Polymorphism
WEEK 10	Introduction to MySQL -Advantages and its features' with examples
WEEK 11	Introduction to Graphics programming – PyGTK and Developing GUI applications using pyGTK
WEEK 12	Scientific Programming using NumPy / SciPy - Image Processing - Processing multimedia files -
WEEK 13	Network Programming, Web services using SOAP, Introduction to Graphics programming - PyGame
WEEK 14	Introduction to Version Control Systems - Subversion/Git
WEEK 15	Writing Unit Tests, Creating Documentation, Contributing to Open Source Projects

Subject-in-Charge

HOD

DEPARTMENT OF COMPUTER SCIENCE
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
M.Sc.COMPUTER SCIENCE
TEACHING PLAN –ODDSEMESTER (2022-2023)

CLASSM.Sc. COMPUTER SCIENCE –I YEAR-SEMESTER I
SUBJECT CODE:22PACSC2SUBJECT NAME: DESIGN AND ANALYSIS OF
ALGORITHMS
SUBJECT IN-CHARGE: B.JAYAPRADHA

WEEK	TOPIC TO BE COVERED
WEEK 1	Introduction: Algorithm Definition – Algorithm Specification and Performance
WEEK 2	Analysis-Asymptotic Notations. Elementary Data Structures-Introduction
WEEK3	Stacks and Queues – Trees – Graphs and its operations
WEEK4	Divide and Conquer: The General Method – Binary Search – Finding The Maximum And Minimum.
WEEK5	Merge Sort and Quick Sort
WEEK 6	Selection sort - Stassen's Matrix Multiplication
WEEK 7	The Greedy Method: General Method - Knapsack Problem - Tree Vertex Splitting
WEEK 8	Job Sequencing With Deadlines - Minimum Cost Spanning Trees – Prim's method
WEEK 9	Minimum Cost Spanning Trees –Krushakal Algorithms - Single Source Shortest path
WEEK 10	Dynamic Programming: The General Method – Multistage Graphs
WEEK 11	All-Pairs Shortest Paths - String Editing
WEEK 12	0/1 Knapsack - The Travelling Salesperson Problem.
WEEK 13	Backtracking: The General Method – The 8-Queens Problem – Sum of Subsets
WEEK 14	Graph Coloring – Hamiltonian Cycles
WEEK 15	Knapsack Problem Branch and Bound: General Method - 0/1 Knapsack Problems.

Subject-in-Charge

HOD

DEPARTMENT OF COMPUTER SCIENCE
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
B.Sc.COMPUTER SCIENCE
TEACHING PLAN –EVEN SEMESTER (2022-2023)

CLASSB.Sc. COMPUTER SCIENCE –I YEAR-SEMESTER I
SUBJECT CODE:22UACSC2SUBJECT NAME:PYTHON PROGRAMMING

LAB

SUBJECT IN-CHARGE: B.JAYAPRADHA

WEEK	TOPIC TO BE COVERED
WEEK 1	Simple input/output statements
WEEK 2	Control flow tools
WEEK3	Conditional statements
WEEK4	String operations
WEEK5	Expressions
WEEK 6	Looping statements
WEEK 7	Programs based on Looping statements
WEEK 8	Lists
WEEK 9	Functions
WEEK 10	Programs using functions
WEEK 11	Recursion
WEEK 12	String handling
WEEK 13	Opening and closing of files
WEEK 14	Reading and writing to a file
WEEK 15	Dictionaries and its operations

Subject-in-Charge

HOD

DEPARTMENT OF COMPUTER SCIENCE
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
B.Sc.COMPUTER SCIENCE
TEACHING PLAN –EVEN SEMESTER (2022-2023)

CLASSB.Sc. COMPUTER SCIENCE –III YEAR-SEMESTER VI
SUBJECT CODE:19UFCSC2 SUBJECT NAME:PYTHON
PROGRAMMING LAB
SUBJECT IN-CHARGE: B.JAYAPRADHA

WEEK	TOPIC TO BE COVERED
WEEK 1	Create a simple calculator to do all the arithmetic operations
WEEK 2	Control flow tools
WEEK3	Looping programs
WEEK4	List as stack
WEEK5	List as queue
WEEK 6	Tuples ,Sequence and Dictionaries
WEEK 7	Mathematical operations
WEEK 8	File operations
WEEK 9	Exception handling
WEEK 10	Classes and Objects
WEEK 11	String handling
WEEK 12	Regular Expressions
WEEK 13	Introduction to MySQL
WEEK 14	Apache logfile
WEEK 15	PyGTK

Subject-in-Charge

HOD

DEPARTMENT OF COMPUTER SCIENCE
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
M.Sc.COMPUTER SCIENCE
TEACHING PLAN –EVENSEMESTER (2022-2023)

CLASS : M.Sc. COMPUTER SCIENCE –I YEAR-SEMESTER II
SUBJECT CODE:22PBSBE2SUBJECT NAME: LEADERSHIP AND
COMMUNICATION SKILLS
SUBJECT IN-CHARGE: B.JAYAPRADHA

WEEK	TOPIC TO BE COVERED
WEEK 1	Leadership – Nature, Characteristics or Features of leadership – Objectives of leadership Functions or Role of a leader – Qualities of a good leader – skills of a leader
WEEK 2	Functions or Role of a leader – Qualities of a good leader – skills of a leader
WEEK3	Leader Vs. Manager – Leadership and management.
WEEK4	Leadership styles – Autocratic leadership
WEEK5	Democratic leadership – Laissez-Faire leadership or Free Rein leadership
WEEK 6	Bureaucratic leadership style – Supportive leadership – Charismatic leaders
WEEK 7	Communication – Elements of Communication – Process of Communication
WEEK 8	Essentials of Communication – Functions of Communication – Features of communication
WEEK 9	Benefits of Communication – Principles of effective communication
WEEK 10	Methods or types of communication – Formal communication – merits and demerits
WEEK 11	Informal communication or Grapevine – merits and demerits – Rumour – Reasons for spread of rumours
WEEK 12	Negative impact of rumours – Methods to deal with rumours – Formal Vs. informal communication
WEEK 13	Oral communication – written communication – downward communication – upward communication
WEEK 14	– Horizontal communication – Types of communication networks.
WEEK 15	Barriers to communication – Steps to overcome barriers to communication.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: M.Sc., COMPUTER SCIENCE

COURSE CODE: 22PACSC2

COURSE NAME: ADVANCED WEB TECHNOLOGY

SEMESTER NO: I

STAFF NAME: Prof.D.KRISHNAKUMAR

WEEK	TOPICS TO BE COVERED
Week-1	.NET Frame work, CLR, .NET Class Library. C#: C# Language Basics- Variables and Data types-Variable Operations.
Week-2	Conditional Logic-Loops-C#: Methods-Building Basic Class-Value types and Reference types.
Week-3	-Understanding Namespaces and Assemblies-The Anatomy of a Web Form, Writing Code.
Week-4	Visual Studio Debugging-The Anatomy of an ASP.NET Application Server controls: The HTML Control Classes.
Week-5	Page Class, Application Events - Web Control Classes- List Controls
Week-6	Table Controls, Web Control Events and AutoPostBack, Error Handling: The Exception Class.
Week-7	The Exception Chain. Handling Exception: Catching Specific Exceptions - Nested Exception Handlers - Exception Handling in Action.
Week-8	Page Tracing: Enabling Tracing - Tracing Information - Writing Trace Information - Application-Level Tracing.
Week-9	State Management: View State, Transferring information between Pages, Cookies,Session States.
Week-10	Session States Configuration, Application State. Understanding Validation- The Validation Controls.
Week-11	Rich Controls: Calendar-AdRotator, Pages with multiple Views,User Controls
Week-12	ADO.NET: The Data Provider Model, Direct Data Access, Disconnected Data Access.
Week-13	Data Binding: Single Value Data Binding, Repeated Value Data Binding.
Week-14	GridView Control,Formatting the GridView, Selecting a GridView Row,Editing with the GridView,Sorting and Paging the GridView.
Week-15	Files and Streams: File System Information,Reading and Writing with Streams, Allowing File Uploads.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039**

PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)

DEGREE: M.Sc., COMPUTER SCIENCE

COURSE CODE:

COURSE NAME: DIGITAL IMAGE PROCESSING

SEMESTER NO: III

STAFF NAME: Prof.D.KRISHNAKUMAR

WEEK	TOPICS TO BE COVERED
Week-1	Fundamentals: Image Sensing and Acquisition, Image Sampling and Quantization, relationship between Pixels, Random noise: Gaussian Markov Random Field, σ -field,
Week-2	Linear and Non-linear Operations, Image processing models: Causal, Semi-causal, Non-causal models. Colour Models: colour Fundamentals.
Week-3	Colour Models: colour Models, Pseudo-colour Image Processing, Full colour Image Processing, colour Transformation, Noise in colour Images.
Week-4	Spatial Domain: Enhancement in spatial domain: Point processing; Mask processing.
Week-5	Smoothing Spatial Filters, Sharpening Spatial Filters. Frequency Domain: Image transforms, FFT, DCT.
Week-6	Karhunen-Loeve transform, Hotelling's T^2 transform, Wavelet transforms and their properties. Image filtering in frequency domain.
Week-7	Edge Detection: Types of edges, threshold, zero-crossing..
Week-8	Gradient operators: Roberts, Prewitt, and Sobel operators; residual analysis based technique.
Week-9	Canny edge detection , Edge features and their applications
Week-10	Image Compression: Fundamentals, Image Compression Models, Elements of Information Theory.
Week-11	Error Free Compression: Huff-man coding; Arithmetic coding; Wavelet transform based coding;
Week-12	Lossy Compression: FFT, DPCM, MRFM based compression, Wavelet transform based, Image Compression standards.
Week-13	Image Segmentation: Detection and Discontinuities, Edge Linking and Boundary Deduction.
Week-14	Threshold, Region-Based Segmentation, Segmentation by Morphological watersheds.
Week-15	The use of motion in segmentation, Image Segmentation based on colour.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
 CHENNAI- 600039**

PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)

DEGREE: M.Sc., COMPUTER SCIENCE

COURSE CODE: 22PBCSC2

COURSE NAME: PRINCIPLES OF COMPILER DESIGN

SEMESTER NO: II

STAFF NAME: Prof.D.KRISHNAKUMAR

WEEK	TOPICS TO BE COVERED
Week-1	LEXICAL ANALYSIS: The Structure of a Compiler – The role of the lexical analyzer - Input buffering - Specification of tokens - Recognition of tokens.
Week-2	Finite automata: NFA – Transition tables – Acceptance of input strings by Automata – DFA.
Week-3	Conversion of an NFA to DFA – Minimizing DFA – Simulation of NFA – Construction of NFA from Regular expression
Week-4	SYNTAX ANALYSIS: Introduction: Definition – The role of the parser. Context-free grammars: Definition of CFG – Notational Conventions – Derivations – Parse Tree and Derivations – Ambiguity – CFGs Vs REs .
Week-5	Writing a grammar: Lexical versus Syntactic Analysis – Eliminating Ambiguity – Elimination of Left Recursion – Left Factoring. Top down Parsing: Definition – Recursive-Descent parsing – FIRST and FOLLOW.
Week-6	Nonrecursive predictive parsing – LL(1) grammars. Bottom-up Parsing: Definition – Reductions – Handle Pruning – Shift-Reduce Parsing – Conflicts during Shift-Reduce Parsing.
Week-7	SYNTAX DIRECTED TRANSLATION: Syntax Analysis Continued: LR parsers – Construction of SLR Parsing table – Construction of CLR Parsing table
Week-8	Construction of LALR Parsing table. Syntax Directed Translation: Inherited and Synthesized attributes – Dependency graphs – Ordering the evaluation of attributes.
Week-9	S-attributed definitions – L-attributed definitions – Applications of Syntax Directed translation.
Week-10	INTERMEDIATE CODE GENERATION: Variants of Syntax trees: DAG for Expressions – The Value Number method for Constructing DAG's. Three Address code: Quadruples, Triples and Indirect Triples.
Week-11	Types and Declarations: Type Expressions – Type Equivalence – Declarations – Storage Layout for Local Names – Sequences of Declarations – Fields in records and classes.
Week-12	Translation of Expressions – Type checking - Control flow - Back patching - Switch Statements - Procedure calls.
Week-13	CODE GENERATION AND CODE OPTIMIZATION: Issues in the design of a code generator - The target language – Address in the Target Code
Week-14	Basic Block and Flow graphs – Optimization of Basic Blocks.
Week-15	A simple code generator – Peephole Optimization.

Subject-in-Charge

HOD

Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)

DEGREE: M.Sc., COMPUTER SCIENCE

COURSE CODE: **19UDCSC1**
 COURSE NAME: **PROGRAMMING IN JAVA**
 SEMESTER NO: IV
 STAFF NAME: Prof.D.KRISHNAKUMAR

WEEK	TOPICS TO BE COVERED
Week-1	Genesis of Java: Creation of Java – why java is important to internet – The Java Buzz words –An overview of Java Object Oriented Programming. Data types
Week-2	Variables – Type conversion and casting – Automatic type promotion in Expressions – Strings.
Week-3	Arrays: One Dimensional Array – Multi Dimensional Array – Operators – Control statements.
Week-4	Class Fundamentals – Declaring objects – Assigning object Reference variables – Introducing Methods – Constructors – Garbage collection – Finalize () Method – Stack class.
Week-5	A Closer Look at Methods and classes: Overloading Methods –Argument passing – Nested and Inner classes – String class – Using command line arguments. Inheritance Basics &Types.
Week-6	Method overriding – Dynamic Method Dispatch – Using Abstract class – Using final with inheritance.
Week-7	Packages & Interfaces - Exception Handling - Creating your own Exception subclasses.
Week-8	Multithreaded Programming: Java Thread Model – Main Thread – Creating a Thread.
Week-9	Creating Multiple Threads–Using is Alive() and join() – Thread priorities – Synchronization – Inter thread Communication.
Week-10	I/O: I/O Basics Reading console Input – writing console output – The Print Writer class – Reading and Writing Files.
Week-11	AWT Classes – Window fundamentals – working with Frame Windows- Working with Graphic Using AWT controls: Controls fundamentals – Labels – using Buttons – Applying check Boxes.
Week-12	Check Box group – Choice controls – Using a Text field – Using a Text Area – Understanding Layout Managers (Flow Layout only).
Week-13	Menu Bars and Menus - JDBC: Introduction - JDBC Architecture.
Week-14	JDBC Classes and Interfaces- Database Access with Databases.
Week-15	Steps in Developing JDBC application – Database manipulation with JDBC.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
 CHENNAI- 600039**

**PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
 LESSON PLAN**

ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)

DEGREE: B.Sc., COMPUTER SCIENCE

SUBJECT CODE: 19UECSC4

SUBJECT NAME: Software Engineering

SEMESTER NO: V

STAFF NAME: K. Radhakrishnan

WEEK	TOPICS TO BE COVERED
Week-1	Introduction - Software Engineering Discipline - Evolution and Impact - Programs Vs Software Products. Software Life Cycle Models: Use of a Life Cycle Models - Classical Waterfall Model
Week-2	Iterative Waterfall Model - Prototyping Model - Evolutionary Model - Spiral Model. Software Project Management: Responsibilities of a Software Project Manager.
Week-3	Project Planning - Metrics for Project Size Estimation - Project Estimation Techniques -Risk Management.
Week-4	Requirements Analysis and Specification: Requirements Gathering and Analysis -Software Requirements Specification (SRS)
Week-5	Formal System Development Techniques. Software Design: Characteristics of a Good Software Design
Week-6	Cohesion and Coupling -Neat Arrangement - Software Design Approaches
Week-7	Function-Oriented Software Design: Overview of SA/SD Methodology - Structured Analysis - Data Flow Diagrams (DFDs).
Week-8	Object Modeling Using UML: Overview of Object-Oriented Concepts - UML Diagrams - Use Case Model - Class Diagrams
Week-9	Interaction Diagrams - Activity Diagrams - State Chart Diagram.
Week-10	User Interface Design: Characteristics of a Good User Interface - Basic Concepts - Types of User Interfaces - Component-Based GUI Development;
Week-11	Coding and Testing: Coding - Testing - UNIT Testing - Black-Box Testing
Week-12	White-Box Testing - Debugging -Integration Testing - System Testing.
Week-13	Software Reliability and Quality Management: Software Reliability - Statistical Testing -Software Quality - Software Quality Management System
Week-14	ISO 9000.Computer Aided Software Engineering: CASE Environment - CASE support in Software Life Cycle - Characteristics of CASE Tools - Architecture of a CASE Environment.
Week-15	Software Maintenance: Characteristics of Software Maintenance - Software Reverse Engineering.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: M.Sc., COMPUTER SCIENCE
SUBJECT CODE: 22PCCSC3
SUBJECT NAME: SOFTWARE PROJECT MANAGEMENT
SEMESTER NO: III
STAFF NAME: K. Radhakrishnan

WEEK	TOPICS TO BE COVERED
Week-1	Project Management Framework: Introduction: Project–Project management - Relationship among Project, Program and Portfolio management– Project and operations management- Role of project manager–Project management body of knowledge–Enterprise Environmental factors.
Week-2	Project life cycle and Organization: Overview of project life cycle–Projects vs Operational Work–Stakeholders– Organizational influences on project management.
Week-3	The Standard for Project Management of a Project: Project management processes for a project: Common project management process interactions - Projects management process groups - Initiating process group planning process group– Executing process group–Monitoring and controlling process group –Closing process group
Week-4	Choosing Methodologies and Technologies –Software Processes and Process Models – Choice of Process Models – The Waterfall Model– Prototyping – other ways of categorizing prototype.
Week-5	Agile Methods –Extreme Programming Selecting the Most Appropriate Process Model – Need of Agile–Iterative vs Incremental–Agile Manifesto and Mindset–Lean, Scrum and Kanban methods.
Week-6	Uncertainty, Risk, and life cycle selection–Scrum Elements overview- 5 levels of planning- Scrum Process overview - Agile Team–roles and responsibilities–Epic–feature–User Stories–PBI–The Sprint.
Week-7	The Project Management Knowledge Areas: Project integration management: Develop project charter– Develop project management plan–Direct and manage project execution–Monitor and control project work.
Week-8	Perform integrated change control–Close project or phase. Project scope management: Collect requirements–Define Scope– Create WBS– Verify Scope– Control Scope.
Week-9	Project team management: Define activities–Sequence activities–Estimate activity resources– Estimate Activity Durations–Develop Schedule–Control Schedule
Week-10	Project cost management: Estimate costs–Determine budget– Control costs. Project Quality Management: Plan quality - perform quality assurance–Perform quality control.
Week-11	Project Human Resource Management: Develop human resource plan–Acquire project team– Develop project team–Manage project team.
Week-12	Project Communications Management: Identify stakeholders–Plan communications - Distribute information–Manage stake holder expectations–report performance
Week-13	Project Risk Management: Plan risk management –Identify risks– Perform qualitative risk analysis–
Week-14	Perform quantitative risk analysis– plan risk responses–Monitor and control risks.
Week-15	Project Procurement Management: Plan–Conduct –Administer–Close procurements

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE
SUBJECT CODE: 19UFCSE2C
SUBJECT NAME: Software Testing
SEMESTER NO: VI
STAFF NAME: K. Radhakrishnan

WEEK	TOPICS TO BE COVERED
Week-1	Introduction: Purpose – Productivity and Quality in Software.
Week-2	Testing Vs Debugging – Model for Testing – Bugs.
Week-3	Types of Bugs – Testing and Design Style.
Week-4	Flow / Graphs and Path Testing – Achievable paths
Week-5	Path instrumentation – Application.
Week-6	Transaction Flow Testing Techniques.
Week-7	Data Flow Testing Strategies
Week-8	Domain Testing: Domains and Paths
Week-9	Domains and Interface Testing.
Week-10	Linguistic –Metrics – Structural Metric
Week-11	Path Products and Path Expressions.
Week-12	Syntax Testing – Formats.
Week-13	Test Cases.
Week-14	Logic Based Testing – Decision Tables
Week-15	Transition Testing – States, State Graph, State Testing.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039**

PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)

DEGREE: M.Sc., COMPUTER SCIENCE
SUBJECT CODE: 22PBCSC3
SUBJECT NAME: Object Oriented Systems Development
SEMESTER NO: II
STAFF NAME: K. Radhakrishnan

WEEK	TOPICS TO BE COVERED
Week-1	Fundamentals of OOSD -Overview of Object Oriented Systems Development: Two orthogonal view of the software-OOSD methodology- Why an Object Orientation.
Week-2	Object basics: Object Oriented Philosophy- Objects-Attributes-Object respond to messages-Encapsulation and information hiding-class hierarchy.
Week-3	Polymorphism-Object relationship and associations. OOSD lifecycle: Software development process- OOSD Use case Driven Approach-Reusability
Week-4	Methodology, Modeling and UML - Object Oriented Methodologies: Rum baugh et al.'s object modelling technique-The Booch methodology- The Jacobson et al. Methodology
Week-5	Patterns-Frameworks-The Unified approach. Unified Modeling Language: Static and dynamic models-Why modeling-
Week-6	UML diagrams- UML class diagram- Use case diagram-UML dynamic modeling-packages and model organization
Week-7	Object Oriented Analysis -Object Oriented Analysis process: Business Object Analysis - Use case driven object oriented analysis -Business process modeling.
Week-8	Use-Case model - Developing effective documentation. Classification: Classifications theory-Approaches for identifying classes-Noun phrase approach-Common class patterns approach-Use-Case Driven approach.
Week-9	Classes, Responsibilities, and Collaborators-Naming classes. Identifying object relationships, attributes, and methods: Association-Super-Sub class relationship-Aggregation- Class responsibility-Object responsibility.
Week-10	Object Oriented Design -Object Oriented Design Process and Design Axioms- OOD process- OOD axioms-Corollaries-Design patterns. Designing classes: Designing classes-Class visibility-Refining attributes.
Week-11	Designing methods and protocols-Packages and managing classes. Access layer: Object Store and persistence- DBMS-Logical and physical Database Organization and access control-Distributed Databases and Client Server Computing-Multi database Systems-Designing Access layer classes.
Week-12	View Layer: Designing view layer classes-Macro level process-Micro level process-The purpose of view layer interface- Prototyping the user interface.
Week-13	Software Quality -Software Quality Assurance: Quality assurance tests- Testing strategies-Impact of Object Orientation on Testing-Test Cases- Test Plan
Week-14	Continuous testing. System Usability and Measuring User satisfaction:UsabilityTesting-Usersatisfactiontest-Atoolforanalyzing user satisfaction.
Week-15	System Usability and Measuring User satisfaction: Introduction- Usability Testing

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039**

PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE

LESSON PLAN

ACADEMIC YEAR- 2022-2023 (ODD)

DEGREE: M.Sc., COMPUTER SCIENCE

COURSE CODE: 22PASBE1

COURSE NAME: SBE I: EMPLOYABILITY SKILLS

SEMESTER NO: 1

STAFF NAME: Dr. G. Sekar

WEEK	TOPICS TO BE COVERED
Week-1	Introduce yourself and introduce a topic.
Week-2	Answering questions and individual presentation practices.
Week-3	Creation of effective power point presentations to present the visuals effectively.
Week-4	Usage of body language in professional contexts.
Week-5	Gestures and facial expressions.
Week-6	Preparation of covering letter and resume for applying jobs.
Week-7	Applying for jobs online: - E-Mail – job portals.
Week-8	Participating in group discussions – understanding group dynamics -
Week-9	Brainstorming the topic.
Week-10	Persuasive skills and People skills.
Week-11	Questioning and clarifying skills
Week-12	Conducting mock GD in any topic.
Week-13	Attending job interviews: Answering questions confidently.
Week-14	Interview etiquette – dress code – body language.
Week-15	Mock interview.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD)**

DEGREE: M.Sc., COMPUTER SCIENCE

COURSE CODE: 19PCCSC2

COURSE NAME: Internet of Things

SEMESTER NO: 3

STAFF NAME: Dr. G. Sekar

WEEK	TOPICS TO BE COVERED
Week-1	Introduction: Physical Design of IoT and Logical Design of IoT. IoT Enabling Technologies.
Week-2	IoT Levels & Deployment Templates. IoT Architecture: M2M (Machine to Machine) high-level architecture.
Week-3	IETF architecture for IoT and Open Geospatial Consortium (OGC) Architecture.
Week-4	IoT and M2M: Introduction to M2M, Differences between IoT and M2M. SDN and NFV for IoT.
Week-5	Need for IoT System Management: SNMP and Network operator requirements. NETCONF-YANG.
Week-6	Basic IoT Protocols: M2M, WSN, SCADA, RFID, IEEE 802.15.4 and Security.
Week-7	IoT Platforms Design Methodology IoT: Ten steps in IoT design methodology. IoT Physical Devices & Endpoints.
Week-8	RASPERRY PI - Raspberry Pi Interfaces.
Week-9	Programming Raspberry Pi with Python.
Week-10	Data Analytics for IoT. Basics of Hadoop ecosystem. Software & Management Tools.
Week-11	Cloud Storage Models & Communication APIs.
Week-12	Cloud for IoT. Amazon Web Services for IoT.
Week-13	Case Studies and Real-World Applications: Real world design constraints
Week-14	IoT applications: Asset management, Industrial automation and smart grid.
Week-15	IoT applications: Commercial building automation and Smart cities.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN)**

DEGREE: B.Sc., COMPUTER SCIENCE

COURSE CODE: 19UECSC5

COURSE NAME: CORE VIII: Open Source Technology

SEMESTER NO: 5

STAFF NAME: Dr. G. Sekar

WEEK	TOPICS TO BE COVERED
Week-1	Introduction to Open Source Software and its History.
Week-2	BSD, The Free Software Foundation and the GNU Project. Open Source Development Model Licenses and Patents.
Week-3	License basics, Important FOSS Licenses. Copyrights and copyleft.
Week-4	Principle and methodologies of Open Source Softwares.
Week-5	Importance of Communities in Open Source Movement. Open source ethics.
Week-6	Social and Financial impacts of open Source technology. Shared software and shared source.
Week-7	PHP Introduction, variables and constants.
Week-8	Various types of PHP operators.
Week-9	Decision making and looping statements.
Week-10	Three types of arrays in PHP.
Week-11	User defined functions and built-in functions.
Week-12	Classes, form processing, sessions and cookie management.
Week-13	Files and directory access in PHP.
Week-14	Database access in PHP. MySQL introduction.
Week-15	Data manipulation statements in PHP.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN)**

DEGREE: B.Sc., COMPUTER SCIENCE

COURSE CODE: 19UECSC6

COURSE NAME: Practical VI: Open Source Technology Lab

SEMESTER NO: 5

STAFF NAME: Dr. G. Sekar

WEEK	TOPICS TO BE COVERED
Week-1	Write a PHP Script to demonstrate Variables and Constants.
Week-2	Write a PHP Script to compare three variables using IF statement and relational operators.
Week-3	Write a PHP Script to perform arithmetic operations on two variables using switch case statement.
Week-4	Create a PHP script using for loop to add all the integers between 0 and 30 and display the total.
Week-5	Write a PHP script using nested for loop that creates a chess board.
Week-6	Create a PHP indexed array to store set of integers and iterate thru loops and for each statement.
Week-7	Create a PHP script that stores the capital and country name of few countries. Sort the list by the name of the country.
Week-8	Create a PHP script to demonstrate call-by-value and call-by-reference using user-defined functions.
Week-9	Create a PHP script to demonstrate built-in functions (Array, Numeric, String and Date).
Week-10	Create a PHP script to create a Book class with members Bookid, BookName, AuthorName and Publishing Date. Include appropriate constructor to assign PublishingDate as current date.
Week-11	Create a PHP script that accepts student's rollnumber, name and marks in three subjects as input and display the total marks.
Week-12	Write a PHP script to create and display Cookies.
Week-13	Write a PHP script to display the number of visitors visited the particular page using session management.
Week-14	Write a PHP script to create and delete files in server-side.
Week-15	Write a PHP script for Pay roll processing using MySQL.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN)**

DEGREE: B.Sc., COMPUTER SCIENCE

COURSE CODE:22UBCSC1

COURSE NAME:CC III : Digital Logic Fundamentals

SEMESTER NO:2

STAFF NAME: Dr. G. Sekar

WEEK	TOPICS TO BE COVERED
Week-1	Number System: Decimal, Hexadecimal, Octal and Binary. Base conversion: i) Decimal to Binary, Hex and Octal ii) Binary to Decimal Hex and Octal iii) Hex to Decimal, Binary and Octal iv) Octal to Decimal, Binary and Hex. Binary Codes: BCD, Excess-3, Gray, ASCII, EBCDIC and Unicode.
Week-2	Code Conversion: Binary to BCD, BCD to Binary, BCD to Excess-3, Excess-3 to BCD, Binary to Gray, Gray to Binary.
Week-3	Logic Gates: NOT, AND, OR, XOR, NAND, NOR AND XNOR gates. Universal Gates: Method of NAND and NOR as universal gates.
Week-4	Boolean Algebra: Laws Rules and Theorems: Associative law, Commutative law, Demorgan's theorems and set of basic and derived rules. Simplification of Boolean Functions using Theorems and K-Map: Simplification of the given boolean expression using the theorems and laws and simplification of boolean expression using K-Maps.
Week-5	Binary arithmetic and representation of binary numbers: Binary addition and subtraction. Sign and Magnitude representation of binary numbers, 1's complement representation and 2's complement representations.
Week-6	Arithmetic Building Blocks: Half-Adder, Full-Adder, Half-Subtractor, Full-Subtractor and Parallel Binary Adder.
Week-7	Combinational Logic: Multiplexers, Demultiplexers, Encoders and Decoders.
Week-8	Code Converters: Binary to BCD, BCD to Binary, BCD to Excess-3, Excess-3 to BCD, Binary to Gray, Gray to Binary.
Week-9	Parity Generators and Checkers: Even parity generator and Even parity checker, Odd parity generator and Odd parity checker.
Week-10	Sequential Logic: Comparison of combinational logic and sequential logic circuits. Basics of Clock. Study about RS, JK, D, and T Flip-Flops.
Week-11	Master-Slave Flip-Flops: Design of Master-Slave flip-flops using J-K flip-flops.
Week-12	Registers: Shift Registers – Types of Shift Registers: Serial-in Serial-out shift right, Serial-in Serial-out shift left. Parallel-in Serial-out register, Serial-in Parallel-out register and bi-directional register.
Week-13	Counters: Comparison of Asynchronous and Synchronous circuits. Asynchronous and Synchronous Counters.

Week-14	Counters: Ripple, Mod, Up-Down Counters and Ring Counters.
Week-15	Memory: Basic Terms and Ideas of Memory –Types of ROMs – Types of RAMs.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN)**

DEGREE: B.Sc., COMPUTER SCIENCE

COURSE CODE: 22UBCSC2

COURSE NAME: CCP IV : Digital Lab

SEMESTER NO: 2

STAFF NAME: Dr. G. Sekar

WEEK	TOPICS TO BE COVERED
Week-1	Study of Logic Gates: Verification of truth table for AND, OR, NOT, NAND, NOR and XOR gates.
Week-2	NAND as Universal Gate: Design of AND, OR, NOT, NOR and XOR gates using only NAND gates.
Week-3	NOR as Universal Gate: Design of AND, OR, NOT, NAND and XOR gates using only NOR gates.
Week-4	Verification of Associative Law: Verification of associative law for addition and verification of associative law for multiplication.
Week-5	Verification of Demorgan's Laws: Verification of Demorgan's first law and second law using two variables and more than two variables.
Week-6	Simplification of logic circuit using K-Map: Simplification of logic circuit using K-Map and implement the circuit and verification of truth table.
Week-7	Study of Half Adder and Half Subtractor: Design circuit for Half Adder and Half Subtractor and verification of truth tables.
Week-8	Study of Full Adder and Full Subtractor: Design circuit for Full Adder and Full Subtractor and verification of truth tables.
Week-9	Study of 4-Bits Parallel Adder and Subtractor: Design circuit for 4-Bits parallel adder, 1's complement subtraction and 2's complement subtraction and verification of truth tables.
Week-10	Implementation of Multiplexer: Design and verification of truth tables for 4:1 Multiplexer and 8:1 Multiplexer.
Week-11	Implementation of DeMultiplexer: Design and verification of 1:4 DeMultiplexer and 1:8 DeMultiplexer.
Week-12	Implementation of Decoder: Design and verification of 2 to 4 and 3 to 8 Decoders.
Week-13	Implementation of 4 to 2 Encoder and 8 to 3 Encoder: Implementation of 4 to 2 Encoder and 8 to 3 Encoder.
Week-14	Implementation of R-S Flip-Flop and J-K Flip-Flop: Implementation and verification of truth tables of R-S Flip-Flop and J-K Flip-Flop.
Week-15	Implementation of Shift Register-Serial Transfer: Design and verification of truth table of shift the given 4-Bit data using the J-K Flip-Flops.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN)**

DEGREE: M.Sc., COMPUTER SCIENCE

COURSE CODE: 22PBCSD1

COURSE NAME: Advanced Web Design

SEMESTER NO: 2

STAFF NAME: Dr. G. Sekar

WEEK	TOPICS TO BE COVERED
Week-1	Structure of an HTML document and elements of HTML.
Week-2	HTML Lists, Tables, Frames and Hyperlinks.
Week-3	Images and Multimedia, HTML Forms and basic controls.
Week-4	CSS Properties and CSS Styling: Background, Text Format and controlling Fonts.
Week-5	CSS: Working with block elements and objects. Working with Lists and Tables. CSS Id and Class
Week-6	Box Model and Border properties. Padding Properties and Margin properties.
Week-7	Grouping in CSS: Dimension, Display, Positioning and Floating.
Week-8	Creating page Layout and Site Designs. Align Attribute sector.
Week-9	Pseudo class, Navigation Bar and Image Sprites.
Week-10	Client Side Scripting basics. Browser Languages.
Week-11	XHTML: Forms, Frames and Tables. DHTML Basics.
Week-12	Object Model and Event Model. Filters and Transitions. Data Controls and handling of Multimedia Data
Week-13	XML Introduction: Syntax and document structure. Document type Definitions.
Week-14	Namespaces and XML schemas. Displaying raw XML documents.
Week-15	Displaying XML documents with CSS. XSLT style sheets. XML Processors

Subject-in-Charge

HOD

Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI, CHENNAI- 600039

PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)

DEGREE: **B.Sc., COMPUTER SCIENCE**
 SUBJECT CODE: 19UCCSC1
 SUBJECT NAME: **OBJECT ORIENTED PROGRAMMING USING C++**
 SEMESTER NO: III
 STAFF NAME: Dr.S.BEHIN SAM

WEEK	TOPICS TO BE COVERED
Week-1	C++ Language Fundamentals:- Procedure Oriented Paradigm and Object Oriented Paradigm - Basic concept of Object Oriented Programming (OOP)
Week-2	Introduction to C++; Structure of C++ Program, Tokens, Keywords, Identifiers, Data Types, Variables
Week-3	Operators , Expressions – Branching statements.
Week-4	Looping statements
Week-5	Arrays: One-dimensional, Two-dimensional and Multi-dimensional arrays
Week-6	Functions: Declaration and definition, call-by-value and call-by-reference – Inline functions – Default arguments – Function Overloading.
Week-7	Classes and Objects: Specifying a Class – Defining member functions
Week-8	Arrays with in class – Arrays of Objects – Objects as function arguments – Friend Function
Week-9	Constructors: - Constructors – Types of constructors & Destructors – Operator Overloading.
Week-10	Inheritance: Definition- Types of Inheritance –Virtual functions
Week-11	Formatted I/O operations, Manipulators and user-defined manipulators - Command line Arguments.
Week-12	C++ Files: - Opening and closing a File, End-of-File detection – File Pointers
Week-13	Error handling during file operations – File manipulation – Class Templates and Function Templates
Week-14	Basics of Exception handling – Introduction to Standard Template
Week-15	Library: Components, Containers, Algorithms and Iterators.

Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI, CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)

DEGREE: **B.Sc., COMPUTER SCIENCE**
SUBJECT CODE: 19UCCSC2
SUBJECT NAME: **PROGRAMMING IN C++ - LAB**
SEMESTER NO: III
STAFF NAME: Dr.S.BEHIN SAM

WEEK	TOPICS TO BE COVERED
Week-1	Write a C++ program to demonstrate function overloading, Default Arguments and Inline function.
Week-2	Write a C++ program to demonstrate Class and Objects
Week-3	Write a C++ program to demonstrate the concept of Passing Objects to Functions
Week-4	Write a C++ program to demonstrate the Friend Functions.
Week-5	Write a C++ program to demonstrate the concept of Passing Objects to Functions
Week-6	Write a C++ program to demonstrate Constructor and Destructor
Week-7	Unary Operator Overloading
Week-8	Binary Operator Overloading
Week-9	Single Inheritance, Multilevel Inheritance, Multiple Inheritance
Week-10	Hierarchical Inheritance, Hybrid Inheritance
Week-11	Write a C++ program to demonstrate Virtual Functions
Week-12	Write a C++ program to manipulate a Text File.
Week-13	Write a C++ program to perform Sequential I/O Operations on a file.
Week-14	Write a C++ program to find the Biggest Number using Command Line Arguments
Week-15	Write a C++ program to demonstrate Exception Handling

Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI, CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)

DEGREE: **B.Sc., COMPUTER SCIENCE**
SUBJECT CODE: 19UDVBE1
SUBJECT NAME: **VALUE EDUCATION**
SEMESTER NO: IV
STAFF NAME: Dr.S.BEHIN SAM

WEEK	TOPICS TO BE COVERED
Week-1	Values: Definition and Meaning of Values-
Week-2	Human Values
Week-3	Social Values, Cultural and Religious Values
Week-4	Ethical Values
Week-5	Global Values and Spiritual Values.
Week-6	The Power of Positive Thinking: ‘Building Self-Confidence’
Week-7	Norman Vincent Peale (From Touchstone: Synergy of Values)
Week-8	Leadership: The Challenge of Excellence
Week-9	Living Excellence –Anthony Robbins
Week-10	The Personal Value of Truth and Its Importance
Week-11	The Story of My Experiments with Truth
Week-12	M.K. Gandhi
Week-13	Human Rights: Universal Declaration of Human Rights
Week-14	Human Rights violations
Week-15	(From Touchstone: Synergy of Values)

Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI, CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)

DEGREE : **B.Sc., COMPUTER SCIENCE**
 COURSE CODE :**19UECSE1A**
 COURSE NAME:**E-COMMERCE TECHNOLOGIES**
 SEMESTER NO :**V**
 STAFF NAME :**Dr.S.Behin Sam**

WEEK	TOPICS TO BE COVERED
Week-1	History of E-commerce and Indian Business Context: E-Commerce - Emergence of the Internet - Emergence of the WWW
Week-2	Advantages of E-Commerce - Transition to E-Commerce in India - The Internet and India - E-transition Challenges for Indian Corporate.
Week-3	Business Models for E-commerce: Business Model - E-business Models Based on the Relationship of Transaction Parties
Week-4	E-business Models Based on the Relationship of Transaction Types.
Week-5	Enabling Technologies of the World Wide Web: World Wide Web - Internet Client-Server Applications - Networks and Internets
Week-6	Software Agents - Internet Standards and Specifications - ISP.E-Marketing : Traditional Marketing
Week-7	Identifying Web Presence Goals - Online Marketing - E-advertising - Ebranding.
Week-8	E-Payment Systems: Main Concerns in Internet Banking - Digital Payment Requirements
Week-9	Digital Token-based e-payment Systems - Classification of New Payment Systems
Week-10	Properties of Electronic Cash - Cheque Payment Systems on the Internet.
Week-11	Information systems for Mobile Commerce: Introduction
Week-12	Wireless Applications - Cellular Network
Week-13	Wireless Spectrum
Week-14	Technologies for Mobile Commerce
Week-15	Wireless Technologies.

Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI, CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)

DEGREE: B.Sc., COMPUTER SCIENCE
 SUBJECT CODE: 19UFCSC3
 SUBJECT NAME: Linux and Shell Programming
 SEMESTER NO: VI
 STAFF NAME: Dr.S.Behin Sam

WEEK	TOPICS TO BE COVERED
Week-1	Introduction to operating system, types of operating system, history of operating. Introduction to Linux, features of Linux and History of Linux. Definition of kernel.
Week-2	Linux Architecture, uses of linux, linux distribution, linux commands
Week-3	Files and directories, file types, linux system standard file, vi editor
Week-4	Introduction to Shell scripting, Shell Types ,Structure of bash shell script, Script file names and permissions
Week-5	Variables, Variable names, Defining and accessing variables, Variable types, Special variables , Read and Echo commands
Week-6	Basic operators: Arithmetic Operators, Relational Operators, Boolean Operators, String Operators and File Test Operators
Week-7	Introduction to Decision Making, if statement, if else statement, elif ladder with example and lab program
Week-8	case statement- Looping: while loop, for loop and until loop – break and continue statements
Week-9	Meta characters -Substitution in expression and command substitution - Input and Output redirection
Week-10	Introduction to Arrays, User-defined functions – Command line arguments,
Week-11	String processing – Process basics – Commands related with processes – Filter commands
Week-12	Pipe Commands and examples
Week-13	Basic System administration: Super User Control
Week-14	Scheduling tasks using cron – System run levels – Configuration directories and files
Week-15	User configuration files – Adding and Removing Users and Groups

Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI, CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)

DEGREE: B.Sc., COMPUTER SCIENCE
SUBJECT CODE: 19UFCSC4
SUBJECT NAME: Linux/ Shell Programming Lab
SEMESTER NO: VI
STAFF NAME: Dr.S.BEHIN SAM

WEEK	TOPICS TO BE COVERED
Week-1	Write a shell script for basic arithmetic and logical calculations
Week-2	Write a shell script to demonstrate the file commands: rm, cp, cat, mv, cmp, wc, split, diff using choice menus (use elif ladder).
Week-3	Write a shell script to show the following system configuration: a. currently logged user and his log name. b. current shell, home directory, Operating System type, current Path setting, current working directory. c. show currently logged number of users, show all available shells d. show CPU information like processor type, speed e. show memory information.
Week-4	Write a Shell Script to demonstrate the following: pipes, Redirection and tee commands.
Week-5	Class Test-1
Week-6	Write a shell script for displaying current date, user name, file listing and directories by getting user choice (use case statement).
Week-7	Write a shell script to create an array and perform various operations in that array.
Week-8	Write a shell script to demonstrate the filter commands.
Week-9	Write a shell script to remove the files which has file size as zero bytes
Week-10	Class Test-2
Week-11	Write a shell script to find the sum of the individual digits of a given number.
Week-12	Write a shell script to find the greatest among the given set of numbers using command line arguments.
Week-13	Write a shell script for palindrome checking.
Week-14	Write a shell script to print the multiplication table of the given argument using for-loop.
Week-15	Model exam

Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI, CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)

DEGREE: M.Sc., COMPUTER SCIENCE
 SUBJECT CODE: 22PBCSD1
 SUBJECT NAME: Advanced Web Design
 SEMESTER NO: II
 STAFF NAME: Dr.S.BEHIN SAM

WEEK	TOPICS TO BE COVERED
Week-1	Structure of an HTML document - Elements of HTML
Week-2	Working with Lists - Tables and Frames - Working with Hyperlinks -
Week-3	Images and Multimedia -Working with Forms and controls.
Week-4	CSS Properties - CSS Styling : Background – Text Format – Controlling Fonts –
Week-5	Working with block elements and objects - Working with Lists and Tables – CSS Id and Class
Week-6	Box Model : Introduction – Border properties – Padding Properties – Margin properties .
Week-7	Grouping - Dimension – Display - Positioning
Week-8	Floating – Align – Pseudo class – Navigation Bar –Image Sprites
Week-9	Attribute sector – Creating page Layout and Site Designs.
Week-10	Client Side Script – Browser Languages
Week-11	XHTML : Forms – Frames – Tables etc.
Week-12	DHTML : Cascading Style Sheets – Object Model – Event Model – Filters and Transitions –Data Controls – Handling of Multimedia Data
Week-13	XML – Introduction – Syntax – Document structure – Document type Definitions – namespaces
Week-14	XML schemas – Displaying raw XML documents –
Week-15	Displaying XML documents with CSS – XSLT style sheets – XML Processors

Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI, CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)

DEGREE: M.Sc., COMPUTER SCIENCE
SUBJECT CODE: 19PBCSD2
SUBJECT NAME: Internnet Programming
SEMESTER NO: III
STAFF NAME: Dr.S.BEHIN SAM

WEEK	TOPICS TO BE COVERED
Week-1	Web Essentials: Clients, Servers and Communication
Week-2	The Internet – Basic Internet protocols – World Wide Web
Week-3	HTTP Request Message – HTTP Response Message – Web Clients – Web Servers.
Week-4	Introduction of HTML: Structure of HTML – Headings – Paragraphs – Lists
Week-5	Text formatting – Colors – Backgrounds - Fonts – Links and Addressing
Week-6	Images – Tables -Publishing HTML on web.
Week-7	Style Sheets: Style sheet basics – Adding style to a document
Week-8	CSS and HTML elements – Font properties
Week-9	Text properties – Color properties.
Week-10	JavaScript: Purpose of Scripting
Week-11	.Including script in HTML document
Week-12	JavaScript Language overview – Basic Validation.
Week-13	Introduction to XML: XML Basics
Week-14	Displaying XML using XSL
Week-15	Displaying XML using Style Sheets.

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039 PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE

SUBJECT CODE: 19UECSC1

SUBJECT NAME: Operating Systems

SEMESTER NO: V

STAFF NAME: RAJA.K

WEEK	TOPICS TO BE COVERED
Week-1	Prepare Motivate questions. Introduction: Views,Goals, Types of System, OS Structure, Components Services
Week-2	Process Management: Process , Process Scheduling, Cooperating process ,Threads ,Inter Process Communication. Assignment-1
Week-3	CPU Scheduling: CPU Schedulers, Scheduling Criteria, Scheduling Algorithms. Class test-1
Week-4	Process Synchronization: Critical-Section Problem, Synchronization Hardware. Assignment-2
Week-5	Semaphores , Classical Problems of Synchronization. Deadlocks: Characterization .
Week-6	Methods for Handling Deadlocks, Deadlock Prevention, Avoidance , Detection, Recovery. Class test-2.
Week-7	Memory Management: Address Binding ,Dynamic Loading and Linking ,Overlays
Week-8	Logical and Physical Address Space , Contiguous Allocation ,Internal and External Fragmentation.Assignment-3
Week-9	Non-Contiguous Allocation: Paging and Segmentation Schemes, Implementation, Fragmentation
Week-10	Virtual Memory: Demand Paging ,Page Replacement. Class test-3
Week-11	Page Replacement Algorithms. File System: File.
Week-12	Concepts ,Access Methods, Directory Structures, File System Structures, Allocation Methods, Free Space Management.
Week-13	I/O System: Overview, I/O Hardware, Application I/O Interface, Transforming I/O Requests to Hardware Operations.
Week-14	Protection , Goals , Domain, Access matrix , The Security Problem Class test-4
Week-15	Authentication , Unix System: Features of UNIX , Basic commands

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039 PG & RESEARCH DEPARTMENT OF COMPUTER
SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE

SUBJECT CODE: 19UCCSC1

SUBJECT NAME: Object Oriented Programming using C++

SEMESTER NO: III

STAFF NAME: K.RAJA

WEEK	TOPICS TO BE COVERED
Week-1	Prepare Motivate questions. C++ Language Fundamentals:-Procedure Oriented Paradigm and Object Oriented Paradigm - Basic concept of Object Oriented Programming (OOP)
Week-2	Introduction to C++; Structure of C++ Program, Tokens, Keywords, Identifiers, Data Types, Variables, Operators, Assignment-1
Week-3	Expressions, Branching statements, Looping statements.
Week-4	Arrays:One-dimensional, Two-dimensional and Multi-dimensional arrays ,Inline functions ,Default arguments , Function Overloading, Class test-1
Week-5	Functions: Declaration and definition, call-by-value and call-by-reference
Week-6	Inline functions ,Default arguments,Function Overloading. Assignment-2
Week-7	Classes and Objects: Specifying a Class , Defining member functions
Week-8	Arrays with in class ,Arrays of Objects ,Objects as function arguments,Friend Function
Week-9	Constructors: Constructors,Types of constructors & Destructors,Operator Overloading, Class test-2
Week-10	Inheritance: Definition- Types of Inheritance
Week-11	Virtual functions ,Formatted I/O operations,, Assignment-3
Week-12	Manipulators and user-defined manipulators , Command line Arguments.
Week-13	C++ Files:Opening and closing a File, End-of-File detection, File Pointers Error handling during file operations
Week-14	File manipulation, Class Templates and Function Templates, Basics of Exception handling, Class test-3
Week-15	Introduction to Standard Template Library: Components, Containers, Algorithms and Iterators.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039 PG & RESEARCH DEPARTMENT OF COMPUTER
SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE

SUBJECT CODE: 19UCCSC2

SUBJECT NAME: Programming in C++ Lab

SEMESTER NO: III

STAFF NAME: K.RAJA

WEEK	TOPICS TO BE COVERED
Week-1	Prepare Motivate questions Introduction to the various object oriented programming concepts using C++, Introduction about C++ software, example programmes, Prepare observation note book for Programming in C++ Lab
Week-2	Write a C++ program to demonstrate function overloading, Default Arguments and Inline function. Class test-1
Week-3	Write a C++ program to demonstrate Class and Objects
Week-4	Write a C++ program to demonstrate the concept of Passing Objects to Functions
Week-5	Write a C++ program to demonstrate the Friend Functions.
Week-6	Write a C++ program to demonstrate the concept of Passing Objects to Functions, Class test-2
Week-7	Write a C++ program to demonstrate Constructor and Destructor
Week-8	Unary Operator Overloading
Week-9	Binary Operator Overloading Class test-3
Week-10	Write a C++ program to demonstrate:Single Inheritance, Multilevel Inheritance, Multiple Inheritance
Week-11	Hierarchical Inheritance, Hybrid Inheritance
Week-12	Write a C++ program to manipulate a Text File
Week-13	Write a C++ program to perform Sequential I/O Operations on a file. Arguments
Week-14	Write a C++ program to demonstrate Virtual Functions and to find the Biggest Number using Command Line, Class test-3
Week-15	Write a C++ program to demonstrate Exception Handling.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039 PG & RESEARCH DEPARTMENT OF COMPUTER
SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE
SUBJECT CODE: 19UFCSC1
SUBJECT NAME: Programming in Python
SEMESTER NO: VI
STAFF NAME: K.RAJA

WEEK	TOPICS TO BE COVERED
Week-1	Prepare Motivate questions Introduction to Python - Why Python - Installing in various Operating Systems
Week-2	Executing Python Programs , Basic Programming concepts, Assignment-1
Week-3	Variables, expressions and statements , Input/ Output , Operators.
Week-4	Conditions, Functions, Arguments, Return values
Week-5	Iteration , Loops , Strings, Data Structures , Lists , Class test-1
Week-6	Dictionaries, Tuples , Sequences, Exception Handling, Assignment-2
Week-7	File Handling , Modules, Regular Expressions, Text handling
Week-8	Object Oriented Programming, Classes, Objects, Inheritance, Overloading, Polymorphism Interacting with Databases
Week-9	Introduction to MySQL, interacting with MySQL, Building a address book with add/edit/delete/search features, Assignment-3
Week-10	Introduction to Graphics programming, Introduction to GTK, PyGTK - Developing GUI applications using pyGTK,Class test-2
Week-11	Scientific Programming using NumPy / SciPy, Image Processing, Processing multimedia files
Week-12	Network Programming, Web services using SOAP, Introduction to Graphics programming - PyGame, Class test-3
Week-13	Introduction to Version Control Systems
Week-14	Subversion/Git, Writing Unit Tests, Class test-4
Week-15	Creating Documentation, Contributing to Open Source Projects

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039 PG & RESEARCH DEPARTMENT OF COMPUTER
SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE

SUBJECT CODE: 19UFCSC1

SUBJECT NAME: PYTHON PROGRAMMING LAB

SEMESTER NO: VI

STAFF NAME: K.RAJA

WEEK	TOPICS TO BE COVERED
Week-1	Learn and understand the programming basics in Python Programming Learn and understand the object-oriented program design and development in Python Programming Prepare observation note book for Programming in Python Lab
Week-2	Create a simple calculator to do all the arithmetic operations
Week-3	Write a program to use control flow tools like if.
Week-4	Write a program to use for loop, Practical Test-1
Week-5	Data structures use list as stack
Week-6	use list as queue ,tuple, sequence
Week-7	Create new module for mathematical operations and use in your program
Week-8	Write a program to read and write files, create and delete directories
Week-9	Write a program with exception handling, Practical Test-2
Week-10	Write a program using classes
Week-11	Connect with MySQL and create address book
Week-12	Write a program using string handling
Week-13	Program to regular expressions Practical Test-3
Week-14	Program to parse apache log file
Week-15	Create a GUI program using pygtk

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039 PG & RESEARCH DEPARTMENT OF COMPUTER
SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE

SUBJECT CODE: 19UBCSN2

SUBJECT NAME: HTML Programming

SEMESTER NO: II

STAFF NAME: K.RAJA

WEEK	TOPICS TO BE COVERED
Week-1	Prepare Motivate questions History of Internet,.
Week-2	WWW, Web Site, Web Page
Week-3	Web Browsers: Internet Explorer, Netscape Communicator, Information searching.
Week-4	HTML: Basic tags,
Week-5	HTML basics, document tags, Assignment-1
Week-6	Head and Body sections.
Week-7	Formatting tags, Class Test-1
Week-8	paragraph and heading tags, Assignment-2
Week-9	List types: Ordered, unordered, Definition list, Nested list
Week-10	Introduction to Hyper link
Week-11	tags for link to web pages, insert a image,
Week-12	Image as a Hyper link, Class Test-2
Week-13	Table – Table tags
Week-14	creation of train time table and class time table. Assignment-3
Week-15	Frame , Class Test-3

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE

SUBJECT CODE: 19UECSC2

SUBJECT NAME: Relational Database Management Systems

SEMESTER NO: V

STAFF NAME: S. SARANYA

WEEK	TOPICS TO BE COVERED
Week-1	Discussion about the data, data structure, server, data mart, data model. Introduction: Database, object, data mart, entity, characteristics of data management system, file concept.
Week-2	DBMS VS File system, Advantages of DBMS, Architecture of DBMS
Week-3	Data, Data models ,Entity, Entity relationship model, ER Diagram.
Week-4	Introduction to Relational DBMS, Relational Database model, structure of relational database model, keys, types of keys, relational Algebra.
Week-5	Unary operation, set operation, left join, right join, inner join, outer join. Definition of normalization.
Week-6	Function dependency, first normal form, second normal form with example, third normal form, Boyce- codd normal form, fourth normal form with example
Week-7	Introduction to DDL, queries on DDL, lab program, Introduction to DML, programs on DML,
Week-8	Data retrieval commands, Select query, TCL Queries, single row function using dual
Week-9	Function, date and time function, numeric and character function, group and aggregate function, set function.
Week-10	Defining the constraints, primary key, foreign key, unique, check, not null.
Week-11	Introduction to PL/SQL, Basic character set
Week-12	PL/SQL structure , PL/SQL Cursor Management
Week-13	Sub program, Function, Procedure
Week-14	Error, Exception handling, introduction to predefined exception, user defined exception
Week-15	Triggers , implicit and explicit cursor , loops in Explicit Cursor

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE
SUBJECT CODE: 19UECSC3
SUBJECT NAME: RDBMS / PLSQL Lab
SEMESTER NO: V
STAFF NAME: S. SARANYA

WEEK	TOPICS TO BE COVERED
Week-1	Data Definition of Base Tables.
Week-2	DDL with Primary key constraints
Week-3	View creation and updation
Week-4	Class test -1
Week-5	DML commands : Insert, delete and update of Base table
Week-6	Demonstrate the Query commands
Week-7	Class test -2
Week-8	Numeric and character function
Week-9	Aggregate of group function
Week-10	Set Operation
Week-11	Program to create a account number for the user and debiting the amount from the account using PL/SQL
Week-12	Write the PL/SQL Commands to calculate the percentage of the students
Week-13	Write a PL/SQL program to demonstrate various exception handling mechanism
Week-14	Create a transparent audit system table for the client using PL/SQL
Week-15	Model exam

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE

SUBJECT CODE: 19UFCSC3

SUBJECT NAME: Linux and Shell Programming

SEMESTER NO: VI

STAFF NAME: S. SARANYA

WEEK	TOPICS TO BE COVERED
Week-1	Introduction to operating system, types of operating system, history of operating. Introduction to Linux, features of Linux and History of Linux. Definition of kernel.
Week-2	Linux Architecture, uses of linux, linux distribution, linux commands
Week-3	Files and directories, file types, linux system standard file, vi editor
Week-4	Introduction to Shell scripting, Shell Types ,Structure of bash shell script, Script file names and permissions
Week-5	Variables, Variable names, Defining and accessing variables, Variable types, Special variables , Read and Echo commands
Week-6	Basic operators: Arithmetic Operators, Relational Operators, Boolean Operators, String Operators and File Test Operators
Week-7	Introduction to Decision Making, if statement, if else statement, elif ladder with example and lab program
Week-8	case statement- Looping: while loop, for loop and until loop – break and continue statements
Week-9	Meta characters -Substitution in expression and command substitution - Input and Output redirection
Week-10	Introduction to Arrays, User-defined functions – Command line arguments,
Week-11	String processing – Process basics – Commands related with processes – Filter commands
Week-12	Pipe Commands and examples
Week-13	Basic System administration: Super User Control
Week-14	Scheduling tasks using cron – System run levels – Configuration directories and files
Week-15	User configuration files – Adding and Removing Users and Groups

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE

SUBJECT CODE: 19UFCSC4

SUBJECT NAME: Linux/ Shell Programming Lab

SEMESTER NO: VI

STAFF NAME: S. SARANYA

WEEK	TOPICS TO BE COVERED
Week-1	Write a shell script for basic arithmetic and logical calculations
Week-2	Write a shell script to demonstrate the file commands: rm, cp, cat, mv, cmp, wc, split, diff using choice menus (use elif ladder).
Week-3	Write a shell script to show the following system configuration: a. currently logged user and his log name. b. current shell, home directory, Operating System type, current Path setting, current working directory. c. show currently logged number of users, show all available shells d. show CPU information like processor type, speed e. show memory information.
Week-4	Write a Shell Script to demonstrate the following: pipes, Redirection and tee commands.
Week-5	Class Test-1
Week-6	Write a shell script for displaying current date, user name, file listing and directories by getting user choice (use case statement).
Week-7	Write a shell script to create an array and perform various operations in that array.
Week-8	Write a shell script to demonstrate the filter commands.
Week-9	Write a shell script to remove the files which has file size as zero bytes
Week-10	Class Test-2
Week-11	Write a shell script to find the sum of the individual digits of a given number.
Week-12	Write a shell script to find the greatest among the given set of numbers using command line arguments.
Week-13	Write a shell script for palindrome checking.
Week-14	Write a shell script to print the multiplication table of the given argument using for-loop.

Week-15	Model exam
---------	------------

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023(ODD SEMESTER)**

DEGREE: B.COM

SUBJECT CODE:

SUBJECT NAME:FUNDAMENTALS OF COMPUTER

SEMESTER NO:V

STAFF NAME: S. SARANYA

WEEK	TOPICS TO BE COVERED
Week-1	Introduction to computer, Computer Basics, Block diagram
Week-2	Software and Programming Languages. Components of Computer System, Central Processing Unit (CPU), input/output Devices
Week-3	Computer Memory: primary and secondary memory Concepts of Hardware and Software.
Week-4	Input Devices: Key board, Mouse, Joystick, Scanner
Week-5	Output devices: Monitor, Printer
Week-6	Types of printers – Plotter
Week-7	Introduction to Operating system-Definition , history of operating system & functions
Week-8	Types of Operating System – Single user
Week-9	Multi user, Multi tasking, Time Sharing
Week-10	Basics of Windows – Basic components of windows, icons
Week-11	Types of icons, taskbar, activating windows, using desktop, title bar, running applications
Week-12	Exploring computer, managing files and folders, copying and moving files and folders
Week-13	Basic of Computer networks: LAN, WAN, MAN, Introduction to internet and its application in education, Browsing
Week-14	Service on Internet: WWW and web-sites, Electronic mails
Week-15	Web Browsers: Internet Explorer, Netscape Communicator.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2020-2021 (ODD SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE
SUBJECT CODE: 22UACSC1
SUBJECT NAME: Programming in Python
SEMESTER NO: I
STAFF NAME: V. NAVEENRAJ

WEEK	TOPICS TO BE COVERED
Week-1	Basics of Python Programming: History of Python-Features of Python -Literal-Constants-Variables - Identifiers
Week-2	Keywords - Built-in Data Types-Output Statements – Input Statements-Comments
Week-3	Indentation- Operators-Expressions-Type conversions.
Week-4	Python Arrays: Defining and Processing Arrays – Array methods.
Week-5	Control Statements: Selection/Conditional Branching statements: if, if-else, nested if and if-elif-else statements.
Week-6	Iterative Statements: while loop, for loop, else suite in loop and nested loops. Jump Statements: break, continue and pass statements.
Week-7	Functions: Function Definition – Function Call – Variable Scope and its Lifetime-Return Statement. Function Arguments: Required Arguments, Keyword Arguments, Default Arguments and Variable Length Arguments- Recursion.
Week-8	Python Strings: String operations- Immutable Strings - Built-in String Methods and Functions - String Comparison.
Week-9	Modules: import statement- The Python module – dir() function – Modules and Namespace – Defining our own modules.
Week-10	Lists: Creating a list -Access values in List-Updating values in Lists.
Week-11	Nested lists -Basic list operations-List Methods.
Week-12	Tuples: Creating, Accessing, Updating and Deleting Elements in a tuple – Nested tuples– Difference between lists and tuples.
Week-13	Dictionaries: Creating, Accessing, Updating and Deleting Elements in a Dictionary – Dictionary Functions and Methods - Difference between Lists and Dictionaries.
Week-14	Python File Handling: Types of files in Python - Opening and Closing files-Reading and Writing files: write() and writelines() methods-append() method
Week-15	read() and readlines() methods – with keyword – Splitting words – File methods - File Positions- Renaming and deleting files.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2020-2021 (ODD SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE

SUBJECT CODE: 22UACSC2

SUBJECT NAME: Programming in Python Lab

SEMESTER NO: I

STAFF NAME: V. NAVEENRAJ

WEEK	TOPICS TO BE COVERED
Week-1	Basic Practice Programs.
Week-2	Exercise for variable, constant and I/O Statements.
Week-3	Exercise for Operators.
Week-4	Exercise for Conditional Statements.
Week-5	Exercise for Loop Statements.
Week-6	Exercise for Jumping Statements. Test for before Exercises
Week-7	Exercise for Functions.
Week-8	Exercise for Recursion.
Week-9	Exercise for Arrays.
Week-10	Exercise for Strings. Test for before Exercises
Week-11	Exercise for Modules.
Week-12	Exercise for List.
Week-13	Exercise for Tuples & Dictionary.
Week-14	Exercise for Dictionary.
Week-15	Exercise for File Handling. Test for before Exercises

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2020-2021 (ODD SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE
SUBJECT CODE: 19UECSC4
SUBJECT NAME: Software Engineering
SEMESTER NO: V
STAFF NAME: V. NAVEENRAJ

WEEK	TOPICS TO BE COVERED
Week-1	Introduction - Software Engineering Discipline - Evolution and Impact - Programs Vs Software Products. Software Life Cycle Models: Use of a Life Cycle Models - Classical Waterfall Model
Week-2	Iterative Waterfall Model - Prototyping Model - Evolutionary Model - Spiral Model. Software Project Management: Responsibilities of a Software Project Manager.
Week-3	Project Planning - Metrics for Project Size Estimation - Project Estimation Techniques -Risk Management.
Week-4	Requirements Analysis and Specification: Requirements Gathering and Analysis -Software Requirements Specification (SRS)
Week-5	Formal System Development Techniques. Software Design: Characteristics of a Good Software Design
Week-6	Cohesion and Coupling -Neat Arrangement - Software Design Approaches
Week-7	Function-Oriented Software Design: Overview of SA/SD Methodology - Structured Analysis - Data Flow Diagrams (DFDs).
Week-8	Object Modeling Using UML: Overview of Object-Oriented Concepts - UML Diagrams - Use Case Model - Class Diagrams
Week-9	Interaction Diagrams - Activity Diagrams - State Chart Diagram.
Week-10	User Interface Design: Characteristics of a Good User Interface - Basic Concepts - Types of User Interfaces - Component-Based GUI Development;
Week-11	Coding and Testing: Coding - Testing - UNIT Testing - Black-Box Testing
Week-12	White-Box Testing - Debugging -Integration Testing - System Testing.
Week-13	Software Reliability and Quality Management: Software Reliability - Statistical Testing -Software Quality - Software Quality Management System
Week-14	ISO 9000.Computer Aided Software Engineering: CASE Environment - CASE support in Software Life Cycle - Characteristics of CASE Tools - Architecture of a CASE Environment.
Week-15	Software Maintenance: Characteristics of Software Maintenance - Software Reverse Engineering.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2020-2021 (EVEN SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE

SUBJECT CODE: 22UBCSC1

SUBJECT NAME: Digital Logic Fundamentals

SEMESTER NO: II

STAFF NAME: V. NAVEENRAJ

WEEK	TOPICS TO BE COVERED
Week-1	Number Systems Basics and Digital Logic Gates Number Systems and Codes: Number System – Base Conversion – Binary Codes.
Week-2	Code Conversion (Binary to BCD, BCD to Binary, BCD to Excess-3, Excess-3 to BCD, Binary to Gray, Gray to Binary).
Week-3	Digital Logic: Logic Gates – Truth Tables – Universal Gates.
Week-4	Boolean Algebra and Binary Arithmetic Boolean Algebra: Laws and Theorems – SOP, POS Methods – Simplification of Boolean Functions using Theorems
Week-5	Simplification of Boolean Functions using K-Map (upto 4-variables only)
Week-6	Binary Arithmetic: Binary Addition – Binary Subtraction – Various Representations of Binary Numbers.
Week-7	Arithmetic Building Blocks: Half-Adder, Full-Adder – Half-Subtractor, Full-Subtractor – Parallel Binary Adder.
Week-8	Combinational Logic Circuits Combinational Logic: Multiplexers – Demultiplexers – Decoders – Encoders
Week-9	Code Converters (Binary to BCD, BCD to Binary, BCD to Excess-3, Excess-3 to BCD, Binary to Gray, Gray to Binary) – Parity Generators and Checkers.
Week-10	Sequential Logic: RS, JK, Flip Flops
Week-11	D and T Flip-Flops - Master-Slave Flip-Flops.
Week-12	Registers: Shift Registers – Types of Shift Registers
Week-13	Counters: Asynchronous and Synchronous Counters - Ripple, Mod
Week-14	Up-Down Counters– Ring Counters.
Week-15	Memory: Basic Terms and Ideas –Types of ROMs – Types of RAMs.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2020-2021 (EVEN SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE
SUBJECT CODE: 22UBCSC2
SUBJECT NAME: Digital Electronics Lab
SEMESTER NO: II
STAFF NAME: V. NAVEENRAJ

WEEK	TOPICS TO BE COVERED
Week-1	Simulator Handling Practice.
Week-2	Exercise for LogicgatesVerification of truth table AND, OR, NOT, NAND, NOR and XOR gates.
Week-3	Exercise for NAND as Universal Gate.
Week-4	Exercise for NOR as Universal Gate.
Week-5	Exercise for implementation of logic circuits verification of Associative law for AND, OR gates.
Week-6	Exercise for Verification of Demorgan's Laws
Week-7	Exercise for Karnaugh's Map reduction and logic circuit implementation
Week-8	Exercise for implementation of Half-Adder and Half-Subtractor.
Week-9	Exercise implementation of Full-Adder and Full-Subtractor.
Week-10	Exercise implementation of Four bit binary Adder/Subtractor
Week-11	Exercise for implementation of 4:1 Multiplexer. Implementation of 1:4 DeMultiplexer
Week-12	Exercise for implementation of 2 to 4 Decoder. Implementation of 4 to 2 Priority Encoder
Week-13	Exercise for implementation of R-S Flip-Flop and J-K Flip-Flop.
Week-14	Exercise for implementation of Shift Register-Serial Transfer.
Week-15	Exercise for implementation of binary Up/Down Counter

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI 600039
PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2020-2021 (EVEN SEMESTER)**

DEGREE: B.Sc., COMPUTER SCIENCE

SUBJECT CODE: 19UFCSE2C

SUBJECT NAME: Software Testing

SEMESTER NO: VI

STAFF NAME: V. NAVEENRAJ

WEEK	TOPICS TO BE COVERED
Week-1	Introduction: Purpose – Productivity and Quality in Software.
Week-2	Testing Vs Debugging – Model for Testing – Bugs.
Week-3	Types of Bugs – Testing and Design Style.
Week-4	Flow / Graphs and Path Testing – Achievable paths
Week-5	Path instrumentation – Application.
Week-6	Transaction Flow Testing Techniques.
Week-7	Data Flow Testing Strategies
Week-8	Domain Testing: Domains and Paths
Week-9	Domains and Interface Testing.
Week-10	Linguistic –Metrics – Structural Metric
Week-11	Path Products and Path Expressions.
Week-12	Syntax Testing – Formats.
Week-13	Test Cases.
Week-14	Logic Based Testing – Decision Tables
Week-15	Transition Testing – States, State Graph, State Testing.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNMENT ARTS COLLEGE(A),
VYASARPADI, CHENNAI- 600039 PG & RESEARCH
DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE : B.Sc., COMPUTER SCIENCE (SHIFT-II)

COURSE CODE :19UECSE1A

COURSE NAME:E-COMMERCE TECHNOLOGIES

SEMESTER NO :V

STAFF NAME :Mr. R. DHANANCHEZHIAN

WEEK	TOPICS TO BE COVERED
Week-1	History of E-commerce and Indian Business Context: E-Commerce - Emergence of the Internet - Emergence of the WWW
Week-2	Advantages of E-Commerce - Transition to E-Commerce in India - The Internet and India - E-transition Challenges for Indian Corporate.
Week-3	Business Models for E-commerce: Business Model - E-business Models Based on the Relationship of Transaction Parties
Week-4	E-business Models Based on the Relationship of Transaction Types.
Week-5	Enabling Technologies of the World Wide Web: World Wide Web - Internet Client-Server Applications - Networks and Internets
Week-6	Software Agents - Internet Standards and Specifications - ISP.E-Marketing : Traditional Marketing
Week-7	Identifying Web Presence Goals - Online Marketing - E-advertising - Ebranding.
Week-8	E-Payment Systems: Main Concerns in Internet Banking - Digital Payment Requirements
Week-9	Digital Token-based e-payment Systems - Classification of New Payment Systems
Week-10	Properties of Electronic Cash - Cheque Payment Systems on the Internet.
Week-11	Information systems for Mobile Commerce: Introduction
Week-12	Wireless Applications - Cellular Network - Wireless Spectrum
Week-13	Technologies for Mobile Commerce
Week-14	Wireless Technologies.
Week-15	Writing Unit Tests.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNMENT ARTS COLLEGE(A),
VYASARPADI, CHENNAI- 600039 PG & RESEARCH
DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE : B.Sc., COMPUTER SCIENCE (SHIFT-II)

COURSE CODE :19UECSC5

COURSE NAME:OPEN SOURCE TECHNOLOGY

SEMESTER NO :V

STAFF NAME :Mr. R. DHANANCHEZHIAN

WEEK	TOPICS TO BE COVERED
Week-1	Introduction: Open Source, Free Software – Commercial Software vs. Open Source Software,
Week-2	History: BSD, The Free Software Foundation and the GNU Project.
Week-3	Open Source Development Model Licences and Patents: License basics, Important FOSS Licenses (Apache, BSD, GPL, LGPL), copyrights and copyleft.
Week-4	Principle and methodologies of Open Source Softwares - Philosophy: Software Freedom, Patents
Week-5	Economics of FOSS: Zero Marginal Cost, Income-generation opportunities - Community Building: Importance of Communities in Open Source Movement
Week-6	Open source ethics - Social and Financial impacts of open source technology - Shared software and shared source.
Week-7	PHP Introduction – Structure of a PHP script – Understanding Data types – Variables - Constants
Week-8	Operators - Controlling Program Flow: Conditional Statements – Looping Statements.
Week-9	PHP Arrays: Indexed, Associative and Multidimensional Arrays – User defined functions -
Week-10	Built-in functions: String, Numeric, Date, Time and Array Functions
Week-11	Creating Classes – Basic Form Processing - Cookies – Session Management.
Week-12	Working with Files and Directories: Reading Files-Writing Files-Processing Directories
Week-13	Database Access with PHP – MySQL: MySQL Functions – Inserting Records – Selecting Records – Deleting Records – Updating Records.
Week-14	Writing Unit Tests, Creating Documentation,
Week-15	Contributing to Open Source Projects

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNMENT ARTS COLLEGE(A),
VYASARPADI, CHENNAI- 600039 PG & RESEARCH
DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE : B.Sc., COMPUTER SCIENCE (SHIFT-II)

COURSE CODE :19UECSC6

COURSE NAME:OPEN SOURCE TECHNOLOGY LAB

SEMESTER NO :V

STAFF NAME :Mr. R. DHANANCHEZHIAN

WEEK	TOPICS TO BE COVERED
Week-1	Simple PHP Programs
Week-2	Write a PHP Script to demonstrate Variables and Constants
Week-3	Write a PHP Script to compare three variables using IF statement and relational operators.
Week-4	Write a PHP Script to perform arithmetic operations on two variables using switch case statement.
Week-5	Create a PHP script using for loop to add all the integers between 0 and 30 and display the total.
Week-6	Write a PHP script using nested for loop that creates a chess board. Create a PHP indexed array to store set of integers and iterate thru loops and foreach statements.
Week-7	Create a PHP script that stores the capital and country name of few countries. Sort the list by the name of the country.
Week-8	Create a PHP script to demonstrate call-by-value and call-by-reference using user defined functions.
Week-9	Create a PHP script to demonstrate built-in functions (Array, Numeric, String and Date).
Week-10	Create a PHP script to create a Book class with members Bookid, BookName, AuthorName and PublishingDate.
Week-11	Create a PHP script that accepts student's rollnumber, name and marks in three subjects as input and display the total marks.
Week-12	Write a PHP script to create and display Cookies.
Week-13	Write a PHP script to display the number of visitors visited the particular page using session management.
Week-14	Write a PHP script to create and delete files in server-side.
Week-15	MODEL TEST

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNMENT ARTS COLLEGE(A),
VYASARPADI, CHENNAI- 600039 PG & RESEARCH
DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE : B.Sc., COMPUTER SCIENCE (SHIFT-II)

COURSE CODE :19UCSBE3

COURSE NAME:PERSONALITY ENRICHMENT

SEMESTER NO :III

STAFF NAME :Mr. R. DHANANCHEZHIAN

WEEK	TOPICS TO BE COVERED
Week-1	Definition of Personality - Components of Personality – structural and functional aspects.
Week-2	Determinants of Personality – biological, psychological and socio-cultural factors.
Week-3	Assessment of Personality – observation, interview and psychological tests.
Week-4	Misconceptions and Classifications -Need for personality development
Week-5	Self analysis through SWOT and Johari window. Elements of motivation - Seven rules of motivation.
Week-6	Techniques and strategies for self motivation. Motivation checklist and Goal setting based on the principle of SMART.
Week-7	Self motivation and life.
Week-8	Regional, National and International events -Geographical, political and historical facts.
Week-9	Information on sports and other recreational activities. Basic knowledge with regard to health and health promotion
Week-10	Definition and importance of memory - Causes of forgetting
Week-11	How to forget (thought stopping), how to remember (techniques for improving memory) The technique of passing exams.
Week-12	The rational decision making process -Improving creativity in decision making and components of creativity.
Week-13	Thinking power- seven steps for dealing with doubt
Week-14	Traits of positive thinkers and high achievers - Goals and techniques for positive thinking
Week-15	Practicing a positive life style.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNMENT ARTS COLLEGE(A),
VYASARPADI, CHENNAI- 600039 PG & RESEARCH
DEPARTMENT OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE : B.Sc., COMPUTER SCIENCE (SHIFT-II)

COURSE CODE :19UFCSE1A

COURSE NAME:COMPUTER NETWORKS

SEMESTER NO :VI

STAFF NAME :Mr. R. DHANANCHEZHIAN

WEEK	TOPICS TO BE COVERED
Week-1	Introduction :Uses of Computer Networks-Business Applications-Home Applications-Mobile Users
Week-2	Social issues– Network Hardware-Personal area networks-Local area networks-Metropolitan area networks-Wide area networks-Internetworks
Week-3	Network Software– Reference Models – OSI and TCP/IP Models.
Week-4	Communication Satellites – Telephone System: Structure, Local Loop
Week-5	Trunks and Multiplexing and Switching.
Week-6	The Data Link Layer: Design Issues – Error Detection and Correction Elementary Data Link Protocols - Medium Access Control SubLayer
Week-7	Multiple Access Protocols –ALOHA-carrier sense Multiple access protocols
Week-8	Collision free protocols-Limited contention protocols.
Week-9	Network Layer - Design Issues - Routing Algorithms-Optimality principle shortest path algorithm
Week-10	Flooding-Distance vector routing-Link state routing-Hierarchical routing
Week-11	Broadcast routing-Multicast routing- Congestion Control Algorithms
Week-12	Transport Layer - Services - Connection Management
Week-13	Addressing, Establishing and Releasing a Connection
Week-14	Application Layer-DNS-Email.
Week-15	Writing Unit Tests.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A),
VYASARPADI, CHENNAI- 600039 PG & RESEARCH DEPARTMENT
OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE : B.Sc., COMPUTER SCIENCE (SHIFT-II)

COURSE CODE :19UDCSC2

COURSE NAME:JAVAPROGRAMMING LAB

SEMESTER NO :IV

STAFF NAME :Mr. R. DHANANCHEZHIAN

WEEK	TOPICS TO BE COVERED
Week-1	Define a class called Student with the attributes name, reg_number and marks obtained in four subjects(m1,m2,m3,m4).Write a suitable constructor and methods to find the total mark obtained by the student and display the details of the student.
Week-2	Write a Java program to find the area of a square, rectangle and triangle by Overloading Constructor
Week-3	Write a Java program to find the area of a square, rectangle and triangle by Overloading Method
Week-4	Write a java program to add two complex numbers. [Use passing object as argument and return object].
Week-5	Define a class called Student_super with data members name, roll number and age. Write a suitable constructor and a method output () to display the details.
Week-6	Derive another class Student from Student_super with data members height and weight. Write a constructor and a method output () to display the details which overrides the super class method output().[Apply method Overriding concept].
Week-7	MODEL TEST-I
Week-8	Write a java program to create an interface called Demo, which contains a double type constant, and a method called area () with one double type argument. Implement the interface to find the area of a circle.
Week-9	Write a java program to create a thread using Thread class.
Week-10	Demonstrate Java inheritance using extends keyword.
Week-11	Write a Java program to throw the following exception, 1) Negative Array Size
Week-12	Write a Java program to throw the following exception, 1)Array Index out of Bounds
Week-13	Write a java program to create a file menu with option New, Save and Close, Edit menu with option cut, copy, and paste.
Week-14	MODEL TEST-II
Week-15	MODEL TEST-III

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A),
VYASARPADI, CHENNAI- 600039 PG & RESEARCH DEPARTMENT
OF COMPUTER SCIENCE
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE : B.Sc., COMPUTER SCIENCE (SHIFT-II)

COURSE CODE :19UDCSC1

COURSE NAME:PROGRAMMING IN JAVA

SEMESTER NO :IV

STAFF NAME :Mr. R. DHANANCHEZHIAN

WEEK	TOPICS TO BE COVERED
Week-1	Genesis of Java: Creation of Java – why java is important to internet – The Java Buzz words An overview of Java Object Oriented Programming. Data types – Variables – Type conversion and casting.
Week-2	Automatic type promotion in Expressions – Strings. Arrays: One Dimensional Array – Multi Dimensional Array
Week-3	Operators – Control statements.
Week-4	Class Fundamentals – Declaring objects – Assigning object Reference variables Introducing Methods
Week-5	Constructors – Garbage collection – Finalize () Method – Stack class.
Week-6	A Closer Look at Methods and classes: Overloading Methods – Argument passing –Nested and Inner classes – String class – Using command line arguments.
Week-7	Inheritance Basics & Types - Method overriding – Dynamic Method Dispatch – Using Abstract class – Using final with inheritance.
Week-8	Packages & Interface - Exception Handling - Creating your own Exception subclasses.
Week-9	Multithreaded Programming: Java Thread Model – Main Thread – Creating a Thread - Creating Multiple Threads–Using is Alive () and join () – Thread priorities – Synchronization – Inter thread Communication.
Week-10	I/O: I/O Basics Reading console Input – writing console output – The Print Writer class – Reading and Writing Files.
Week-11	AWT Classes – Window fundamentals – working with Frame Windows - working with Graphic Using AWT controls: Controls fundamentals – Labels – using Buttons
Week-12	Applying check Boxes – Check Box group – Choice controls – Using a Text field – Using a Text Area
Week-13	Understanding Layout Managers (Flow Layout only) – Menu Bars and Menus.
Week-14	JDBC -Introduction - JDBC Architecture - JDBC Classes and Interfaces
Week-15	Database Access with Databases -Steps in Developing JDBC application – Database manipulation with JDBC.

Subject-in-Charge

HOD

DEPARTMENT OF PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Plant Biology and Plant Biotechnology
Teaching plan (ODD semester – 2022-23)

Class : B.Sc. Plant Biology and Plant Biotechnology – I year Semester: I
Subject Code : Name of the Subject: Algology
Subject In charge : Dr.P.Balaji and Dr. R.Kalaikanthan

Week	Topics to be Covered
Week -1	Classification of Algae proposed by Silva PC (1982): General characters of Algae (occurrence and distribution)
Week -2	General account of thallus structure, pigmentation, reserve food materials, reproduction and life cycle - Cyanophyta,
Week -3	Chlorophyta,
Week -4	Phaeophyta
Week -5	Rhodophyta
Week -6	Detailed study of structure, reproduction and life cycles (excluding developmental studies) of Chlamydomonas
Week -7	Diatoms,
Week -8	Colonial -Volvox, Filamentous - Anabaena
Week -9	Oedogonium,
Week -10	Detailed study of structure, reproduction and life cycles (excluding developmental studies) of :
Week -11	Siphonous - Caulerpa,
Week -12	parenchymatous - Sargassum
Week -13	Gracilaria
Week -14	Economic importance of algae: Algae as food and feed;
Week -15	Agar-agar, Alginic acid and Carrageenan; Diatomite

DEPARTMENT OF PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Plant Biology and Plant Biotechnology
Teaching plan (ODD semester – 2022-23)

Class : B.Sc. Plant Biology and Plant Biotechnology – II year Semester: III
Subject Code : Name of the Subject: BRYOPHYTES AND PTERIDOPHYTES
Subject In charge : Dr.A.Thangaraja and Dr.R.Kalaikanthan

Week	Topics to be Covered
Week -1	Occurrence and distribution; General characters
Week -2	Classification of Bryophytes.- Watson.
Week -3	Study of thallus structure, reproduction and life cycle of the follow genera Hepaticopsida (Marchantia);
Week -4	Anthocerotopsida (Anthoceros)
Week -5	Bryopsida (Funaria).
Week -6	Occurrence & distribution; General characters
Week -7	Classification of Pteridophytes - Reimer
Week -8	Study of structure, reproduction and life cycle of the follow genera (excluding developmental studies) : Pteridophytes: (1) Lycopodium
Week -9	(2) Selaginella
Week -10	(3) Equisetum Vegetative character
Week -11	(3) Equisetum Reproduction
Week -12	(4) Adiantum
Week -13	Ecology and Economic importance of Bryophytes
Week -14	Stelar evolution in Pteridophytes
Week -15	Heterospory and Seed Habits

DEPARTMENT OF PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Plant Biology and Plant Biotechnology
Teaching plan (ODD semester – 2022-23)

Class : B.Sc. Plant Biology and Plant Biotechnology – III year Semester: V
Subject Code : Name of the Subject: ANATOMY AND EMBRYOLOGY
Subject In charge : Dr. R.Kalaikanthan and Dr.A.Thangaraja

Week	Topics to be Covered
Week -1	Tissues – meristematic, simple, complex tissues
Week -2	Theories of Shoot and root apex –(apical cell, histogen, tunica corpus)
Week -3	Primary structure of stem of dicotyledons and mono cotyledons.
Week -4	Primary structure of root of dicotyledons and mono cotyledons
Week -5	Dicot and monocot leaf.
Week -6	Secondary structure of stem of dicotyledons
Week -7	Anomalous secondary growth in stem – <i>Boerhaavia</i> ,
Week -8	Secondary growth in monocot stem- <i>Dracaena</i> . Nodal anatomy
Week -9	Periderm structure and development; Phellam, phellogen, phelloderm, rtydome and lenticel.
Week -10	Structure of anther. Development of male gametophyte
Week -11	Structure and types of ovule. Structure of female gametophyte.
Week -12	Fertilization – double fertilization syngamy, triple fusion – endosperm – types (nuclear, cellular, helobial)
Week -13	ruminate endosperm, haustoria – function of endosperm
Week -14	structure and development of mature dicot embryo (<i>Capsella</i>).
Week -15	Structure and development of monocot embryo (<i>Najas</i>)

DEPARTMENT OF PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Plant Biology and Plant Biotechnology
Teaching plan (ODD semester – 2022-23)

Class : B.Sc. Plant Biology and Plant Biotechnology – III year Semester: V
Subject Code : Name of the Subject: GENETICS, EVOLUTION AND PLANT BREEDING
Subject In charge : Dr.A.Thangaraja and Dr.R.Kalaikanthan

Week	Topics to be Covered
Week -1	Mendelian Genetics- Mendel's Laws
Week -2	monohybrid and Dihybrid Cross
Week -3	Test and Back crosses. Deviation from Mendelian ratio – incomplete dominance, lethal factor, Codominance;
Week -4	multiple alleles; Non allelic interactions – dominant epistasis,
Week -5	Recessive epistasis, Complementary gene, supplementary gene,.
Week -6	Linkage and crossing over
Week -7	Sex determination in plants. Sex linked inheritance – Haemophilia and colour blindness
Week -8	Extra nuclear inheritance in Maize, Bacterial genetics – Transformation,
Week -9	conjugation, transduction.
Week -10	Evolution: Origin of life, chemosynthetic theory
Week -11	Evolutionary theory of Lamarck , Darwin
Week -12	de Vries, Concept of species- Allopatric and Sympatric. Isolating mechanisms.
Week -13	Methods of crop improvement – Introduction, acclimatization
Week -14	selection – mass, pure line and clonal.
Week -15	Hybridization – Hybrid vigour Breeding for crop improvement for Paddy.

DEPARTMENT OF PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Plant Biology and Plant Biotechnology
Teaching plan (ODD semester – 2022-23)

Class : B.Sc. Plant Biology and Plant Biotechnology – III year Semester: V
 Subject Code : Name of the Subject: MORPHOLOGY, TAXONOMY OF ANGIOSPERMS AND
 ECONOMIC BOTANY
 Subject In charge : Dr.G.Sampalathkumar

Week	Topics to be Covered
Week -1	A brief account of Leaf: Phyllotaxy, simple compound and
Week -2	Leaf modifications; inflorescence-types;
Week -3	Flower: description of floral parts;
Week -4	Fruits-types Systems of classification – outline classification of Linnaeus;
Week -5	Bentham & Hooker.
Week -6	Binomial nomenclature- IUCN- citation of authors
Week -7	herbarium technique. Botanical survey of India (BSI)
Week -8	Detailed study of the range of characters and plants of economic importance of the following families Polypetalae - <i>Annonaceae, Caesalpinaceae</i>
Week -9	<i>Rutaceae</i> Gamopetale – <i>Rubiaceae</i> ,
Week -10	<i>Asteraceae</i> , <i>Asclpiadaceae</i>
Week -11	<i>Solanaceae</i> , <i>Monochlamydae</i> – <i>Euphorbiaceae</i> ,
Week -12	<i>Amaranthaceae</i> , <i>Monocotyledons</i> - <i>Lilliaceae</i>
Week -13	<i>Poaceae</i>
Week -14	Study of binomial, family and morphology useful parts and uses of the following Cereals – paddy;
Week -15	Pulses – Red gram Oil seeds – Groundnut; Fibers – Cotton; Timbers – Teak.

DEPARTMENT OF PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Plant Biology and Plant Biotechnology
Teaching plan (ODD semester – 2022-23)

Class : B.Sc. Plant Biology and Plant Biotechnology – III year Semester: V
Subject Code : Name of the Subject: CELL AND MOLECULAR BIOLOGY
Subject In charge : Dr.A.Thangaraja and Dr.P.Balaji

Week	Topics to be Covered
Week -1	Introduction – prokaryotic and eukaryotic cell.
Week -2	Occurrence, structure and function of Plasma membrane, endoplasmic reticulum
Week -3	golgi bodies, lysosomes, ribosomes, mitochondria, chloroplast and nucleus.
Week -4	chloroplast and nucleus.
Week -5	Chromosomes – structure, number
Week -6	euchromatin, heterochromatin, giant chromosomes– polytene and lampbrush
Week -7	cell division -mitosis and meiosis – cell cycle.
Week -8	Nucleic acid – DNA - structure and types (A, B, C & Z).
Week -9	Watson and Crick model of DNA. DNA as genetic material,
Week -10	DNA synthesis and replication (prokaryote)
Week -11	RNA - types
Week -12	Transcription in Prokaryotes - Initiation, elongation, termination,
Week -13	Genetic code - Wobble hypothesis, Translation in prokaryotes.
Week -14	General principles of Gene Regulation
Week -15	Gene Regulation in prokaryotes, Operon concept, <i>lac</i> Operon

DEPARTMENT OF PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Plant Biology and Plant Biotechnology
Teaching plan (ODD semester – 2022-23)

Class : B.Sc. Plant Biology and Plant Biotechnology – III year Semester: V
Subject Code : Name of the Subject: CELL AND MOLECULAR BIOLOGY
Subject In charge : Dr.A.Thangaraja and Dr.P.Balaji

Week	Topics to be Covered
Week -1	Introduction – prokaryotic and eukaryotic cell.
Week -2	Occurrence, structure and function of Plasma membrane, endoplasmic reticulum
Week -3	golgi bodies, lysosomes, ribosomes, mitochondria, chloroplast and nucleus.
Week -4	chloroplast and nucleus.
Week -5	Chromosomes – structure, number
Week -6	euchromatin, heterochromatin, giant chromosomes– polytene and lampbrush
Week -7	cell division -mitosis and meiosis – cell cycle.
Week -8	Nucleic acid – DNA - structure and types (A, B, C & Z).
Week -9	Watson and Crick model of DNA. DNA as genetic material,
Week -10	DNA synthesis and replication (prokaryote)
Week -11	RNA - types
Week -12	Transcription in Prokaryotes - Initiation, elongation, termination,
Week -13	Genetic code - Wobble hypothesis, Translation in prokaryotes.
Week -14	General principles of Gene Regulation
Week -15	Gene Regulation in prokaryotes, Operon concept, <i>lac</i> Operon

DEPARTMENT OF PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Plant Biology and Plant Biotechnology
Teaching plan (EVEN semester – 2022-23)

Class : B.Sc. Plant Biology and Plant Biotechnology – I year Semester: II
Subject Code : Name of the Subject: MYCOLOGY AND LICHENOLOGY
Subject In charge : Dr.P.Balaji and Dr. R.Kalaikanthan

Week	Topics to be Covered
Week -1	Classification of fungi proposed by Alexopoulos, 1962
Week -2	General Characters, occurrence and mode of nutrition of Fungi
Week -3	Detailed study of structure, reproduction and life cycles of the following Oomycetes - <i>Albugo</i>
Week -4	Ascomycetes - <i>Saccharomyces</i>
Week -5	Penicillium
Week -6	Basidiomycetes - <i>Agaricus</i>
Week -7	Deuteromycetes - <i>Fusarium</i>
Week -8	Plant Pathology- Tikka disease and Citrus Canker
Week -9	Study of the General characteristics of Lichens
Week -10	Structure & Reproduction of Crustose, Foliose and Fruticose Lichens
Week -11	Detailed study of <i>Usnea</i> .
Week -12	Economic importance of Fungi: Medicine, food,
Week -13	biopesticides, biofertilizers
Week -14	industrial uses such as Production of ethyl alcohol, citric acids
Week -15	lipase enzyme.

DEPARTMENT OF PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Plant Biology and Plant Biotechnology
Teaching plan (EVEN semester – 2022-23)

Class : B.Sc. Plant Biology and Plant Biotechnology – II year Semester: IV
Subject Code : Name of the Subject: GYMNOSPERMS AND PALEOBOTANY
Subject In charge : Dr.A.Thangaraja and Dr. R.Kalaikanthan

Week	Topics to be Covered
Week -1	Distribution of gymnosperms – General characters
Week -2	Economic importance
Week -3	classification of Gymnosperms- K.R. Sporne 1962.
Week -4	Detailed study of the following types (Excluding developmental stages) – <i>Cycas</i> ,
Week -5	<i>Cycas</i> , (Contd)
Week -6	<i>Pinus</i>
Week -7	<i>Pinus</i> (Contd)
Week -8	Geological time scale
Week -9	Introduction to fossils;
Week -10	Types of fossils
Week -11	Fossilization processes - compression,
Week -12	casts, mold, petrification,
Week -13	impressions and coal balls radio carbon dating.
Week -14	Brief study of the following fossils <i>Lepidodendron</i>
Week -15	2 <i>Calamites</i> 3. <i>Williamsonia sewardiana</i>

DEPARTMENT OF PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Plant Biology and Plant Biotechnology
Teaching plan (EVEN semester – 2022-23)

Class : B.Sc. Plant Biology and Plant Biotechnology – III year Semester: VI
Subject Code : Name of the Subject: **PLANT BIOTECHNOLOGY AND BIOINFORMATICS**
Subject In charge : Dr.A.Thangaraja

Week	Topics to be Covered
Week -1	Introduction to Genetic Engineering; techniques
Week -2	Restriction endonucleases- Ligation, Adapters and Linkers
Week -3	Cloning Vectors-Plasmids; Hybridization- Southern Blotting
Week -4	Genetic Engineering in plants; Gene transfer technique using Agrobacterium
Week -5	physical delivery methods:PEG stimulated, Microinjection Electroporation.
Week -6	Plant tissue culture – totipotency, nutrient medium – MS medium
Week -7	Sterilization, Root and shoot culture
Week -8	Anther culture, Protoplast isolation and fusion – somatic hybrid, Synthetic seeds.
Week -9	Application of Plant Tissue Culture,
Week -10	Transgenic plants – methods- Pest resistant plants – BT cotton;
Week -11	Golden rice; flavr savr tomato
Week -12	Introduction to Bioinformatics – NCBI- EMBL- DDBJ
Week -13	Biological database – Genbank- PDB; literature database (Pubmed);
Week -14	Sequence alignment – global – local ; gap- gap penalty
Week -15	Pair wise and Multiple sequence alignment, Sequence similarity search – BLAST

DEPARTMENT OF PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Plant Biology and Plant Biotechnology
Teaching plan (EVEN semester – 2022-23)

Class : B.Sc. Plant Biology and Plant Biotechnology – III year Semester: VI
Subject Code : Name of the Subject: ECOLOGY, PHYTOGEOGRAPHY&BIOSTATISTICS
Subject In charge : Dr.P.Balaji and Dr.A.Thangaraja

Week	Topics to be Covered
Week -1	Biotic and abiotic factors and their influence on vegetation
Week -2	a brief account of microbes, plants, animals,
Week -3	soil, wind, light, temperature, rainfall and fire
Week -4	Biogeochemical cycles (Nitrogen, Carbon)
Week -5	Ecosystem - concept, processes and components
Week -6	Food chain, food web, energy flow, pyramids.
Week -7	Nutrient cycling. Types of ecosystems - marine and grassland.
Week -8	Autecology and Synecology - Methods of study of vegetation (Quadrat and transect)
Week -9	Plant succession - Hydrosere and Xerosere
Week -10	Ecological classification of plants Morphological and anatomical features of plants and their correlation to the habitat factors
Week -11	Phytogeographical regions of India
Week -12	Endemism – Indian flora – Age and area hypothesis and continental drift
Week -13	Endangered species; Hot spots. Classification of data,
Week -14	mean, median and mode
Week -15	Standard deviation, standard error, variance, chi square test.

DEPARTMENT OF PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Plant Biology and Plant Biotechnology
Teaching plan (EVEN semester – 2022-23)

Class : B.Sc. Plant Biology and Plant Biotechnology – III year Semester: VI
 Subject Code : Name of the Subject: ECOLOGY, PHYTOGEOGRAPHY&BIOSTATISTICS
 Subject In charge : Dr.G.Sampathkumar

Week	Topics to be Covered
Week -1	Structure and classification of carbohydrates, lipids, proteins and nucleic acids
Week -2	Enzymes – Properties, nomenclature and classification as per IUBC (enzyme commission of the International Union of Biochemistry)
Week -3	cofactors, coenzymes and mode of action. Factors affecting enzyme action.
Week -4	Water relations – diffusion, permeability, osmosis, absorption of water – Apoplast and symplast.
Week -5	Mechanism – passive and active. Translocation of water – Ascent of sap
Week -6	Transpiration – types and significance, factors. Stomatal mechanisms.
Week -7	Photosynthesis – Photosystem I and II, cyclic and non cyclic electron transport – C ₃
Week -8	C ₄ pathways – factors affecting photosynthesis
Week -9	Photo respiration. Respiration – Aerobic – anaerobic
Week -10	glycolysis – Kreb's cycle
Week -11	electron transport system – oxidative phosphorylation – factors affecting respiration.
Week -12	Nitrogen assimilation – biological nitrogen fixation nitrogen fixing organisms, legume – <i>Rhizobium</i> symbiosis.
Week -13	Phytohormones - auxins, gibberellins, cytokinins, ethylene and abscissic acid
Week -14	Photomorphogenesis – Photoperiodism - Phytochromes – Florigen concept.
Week -15	Dormancy (Seed and bud), Seed viability and germination.

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Advanced Zoology and Biotechnology
Teaching plan (ODD semester – 2022 -23)

Class : B.Sc. **Advanced Zoology and Biotechnology** - I year Semester: I
 Subject Code : **22UAAZC1** Name of the Subject: **INVERTEBRATA**
 Subject In charge : Dr.K.Samyappan, Dr N.Thirunavukkarasu Dr K.Mohan and Dr I Malaichelvi

Week	Topics to be Covered
Week -1	Classification of Animal kingdom, General characters of Protozoa
Week -2	Type study paramecium
Week -3	Protozoan parasites and Life cycle of Plasmodium
Week -4	General characters of Porifera and Coelenterata
Week -5	Type study Leucosolenia and obelia
Week -6	Canal system of sponges and Types of coral and coral reefs
Week -7	General characters of Platyhelminthus and Aschelminthus
Week -8	Type study Taenia solium and Ascaris
Week -9	Nematode parasites and parasitic adaptation
Week -10	General characters of Arthropoda and Annelida,
Week -11	Type study Neeris and Prawn
Week -12	Metamerism in Annelida, mouth parts of insects and larval forms
Week -13	General characters of Mollusca and Echinodermata
Week -14	Type study Fresh water mussel and star fish
Week -15	Torsion in Gastropods. Economic important of mollusca and Larval form of Echinodermata.

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Advanced Zoology and Biotechnology
Teaching plan (ODD semester –2022 -23)

Class : B.Sc. **Advanced Zoology and Biotechnology** – II year Semester: III
Subject Code : **19UCAZC1** Name of the Subject: **CELL BIOLOGY AND BIOCHEMISTRY**
Subject In charge : Dr.K.SAMYAPPAN AND Dr K MOHAN

Week	Topics to be Covered
Week -1	Cell theory-prokaryotic and eukaryotic cell
Week -2	Classification of carbohydrates- monosaccharides Holi Oligosaccharides,Disaccharides ,Polysaccharides
Week -3	Plasma membrane -Model ,ultrastructure and functions
Week -4	Structure of carbohydrates with reference to glucose, fructose, lactose maltose and sucrose
Week -5	Cell junctions -ultrastructure and function of endoplasmic reticulum , Golgi complex, Lysosomes and centrioles
Week -6	Classification of Amino acids and Proteins (fibrous and globular simple, conjugated)
Week -7	Mitochondria structure and function
Week -8	Structure of protein(primary and secondary and tertiary)
Week -9	Structure and functions of Nucleus and Nucleolus
Week -10	Classification of lipids -simple lipids ,compound lipids and Fatty acids
Week -11	Cell division -Mitosis, Meiosis and Interphase nucleus. Cell cycle.
Week -12	Enzymes- Classification and Mechanism of enzyme action- Factors influencing enzyme actions , Enzyme inhibition
Week -13	Chromosome- Structure, types DNA a structure and functions DNA replication in prokaryotes and Eukaryotes
Week -14	Carbohydrate metabolism- glycolysis and krebs cycle Electron transport chain and formation of ATP Glycogenesis ,Glycogenolysis,Gluconeogenesis Beta -oxidation of fatty acids
Week -15	Ultrastructure ,function and types of ribosomes. Types and structure of RNA.Protein synthesis in prokaryotes.

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Advanced Zoology and Biotechnology
Teaching plan (ODD semester – 2022 -23)

Class : B.Sc. **Advanced Zoology and Biotechnology** – III year Semester: V
Subject Code : **19UEAZC1** Name of the Subject: **BIOTECHNOLOGY**
Subject In charge : Dr. V.Mathivannan

Week	Topics to be Covered
Week -1	Recombinant DNA technology- Tools used in genetic engineering- Restriction enzymes, polymerase and ligases. Cloning Vectors
Week -2	Linkers and adaptors ,Cloning Vectors – Types, plasmids (pBR 322,), Gene cloning in <i>E.coli</i> .
Week -3	Isolation of DNA – insertion of DNA - Transformation – uptake of DNA by host cell – selection of clones- identification of recombinants.
Week -4	Polymerase chain reaction technique and its application- Southern, Western and Northern Blotting techniques and its application
Week -5	DNA finger printing and its application
Week -6	Animal cell tissue culture
Week -7	Production of single cell protein
Week -8	Biofertilizers, Biopesticides
Week -9	Production of industrial enzymes
Week -10	Production of Insulin, vaccines and antibiotics
Week -11	Production of recombinant proteins having therapeutic and diagnostic applications
Week -12	Genetically modified organism
Week -13	Intellectual property rights and protection
Week -14	Patenting, copyright and trade mark of biological material
Week -15	BioEthics

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Advanced Zoology and Biotechnology
Teaching plan (ODD semester – 2022 -23)

Class : B.Sc. **Advanced Zoology and Biotechnology** – III year Semester: V
 Subject Code : **19UEAZC2** Name of the Subject: **MICROBIOLOGY AND IMMUNOLOGY**
 Subject In charge : Dr.I.Malaichelvi and Dr.T.Mathuram

Week	Topics to be Covered
Week -1	Scope of microbiology - Classification of microorganisms
Week -2	Immunity - Classification
Week -3	Salient features of bacteria, virus, Algae, fungi
Week -4	Structure and function of cells involved in the immune response
Week -5	Ultra structure of bacterial cell
Week -6	Primary and secondary lymphoid organs
Week -7	Bacterial growth - Culture media
Week -8	Antigens - Epitopes, Haptens, Adjuvants, Grossman Antigens
Week -9	Sterilization techniques
Week -10	Immunoglobulins - Types and Structure
Week -11	Staining techniques - bioremediation
Week -12	Mechanism of cells mediated and humoral immunity
Week -13	Microbes in various food products - Milk Product - Preservation of milk
Week -14	Tissue typing and Graft management Vaccines
Week -15	Antigen-antibody reaction, Production and application of monoclonal antibodies, immunotechnique

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Advanced Zoology And Biotechnology
Teaching plan (ODD semester – 2022 -23)

Class : B.Sc. Advanced Zoology And Biotechnology – III year Semester: VI
Subject Code : **19UEAZC3** Name of the Subject: **ENVIRONMENTAL BIOLOGY**
Subject In charge : Dr.T KUMARAN and Dr N.THIRUNAVUKKARASU

Week	Topics to be Covered
Week -1	Components of ecosystem: environmental factors Abiotic factors – Soil, Light and Temperature as ecological factors
Week -2	Biotic factors – Animal relationships
Week -3	Limiting factors- basic concepts - Leibig's law of minimum - Shelford's law of tolerance
Week -4	Biogeochemical cycles – Nitrogen, Carbon and Oxygen
Week -5	Pond ecosystem – Primary and secondary production – Food chain –
Week -6	Food web – Trophic levels – Energy flow – Ecological Pyramids
Week -7	Community Ecology – Types of communities – Characteristics of community
Week -8	Population Ecology - Characteristics affecting population
Week -9	Population density – Density dependant factors – Population fluctuations
Week -10	Terrestrial Ecology
Week -11	Freshwater Ecology - Physico chemical nature of fresh water – Biotic communities
Week -12	Marine Ecology Characteristics - Biotic communities of pelagic, benthic, intertidal and sublittoral zones
Week -13	Wild life conservation and management
Week -14	Red data book- IUCN, WWF, CITES. Protected areas, biosphere reserves, national parks and sanctuaries in India
Week -15	Green Chemistry Basic principles of green chemistry. Organic farming and its merits

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Advanced Zoology And Biotechnology
Teaching plan ODD semester – 2022 -23)

Class : B.Sc. Advanced Zoology And Biotechnology – III year Semester: VI
Subject Code : **19UEAZC4** Name of the Subject: **ANIMAL PHYSIOLOGY**
Subject In charge : DrM.Sasikala and Dr R Saravanan

Week	Topics to be Covered
Week -1	Nutritional physiology- Balanced diet
Week -2	Digestion of carbohydrates, proteins and fats
Week -3	Respiratory physiology
Week -4	Circulatory physiology
Week -5	Mechanism of blood clotting- Disorders of blood clotting
Week -6	Conduction of Heartbeat and pace maker - Pulse and blood pressure Cardiac abnormality
Week -7	Muscle physiology
Week -8	Structure of Neuron - types of neurons - nerve impulse propagation
Week -9	Neuro transmitters - Reflex action - Nerve disorders
Week -10	Renal physiology
Week -11	Urea cycle. Abnormal constituents of urine, renal disorders
Week -12	Osmoregulation -- osmo-ionic regulation in protozoans and fish
Week -13	Sensory physiology - Chemoreceptors
Week -14	Structure of eye- Physiology of vision- Eye defects
Week -15	Structure of ear and mechanism of hearing - Hearing impairments

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Advanced Zoology And Biotechnology
Teaching plan (ODD semester – 2022 -23)

Class : B.Sc. Advanced Zoology And Biotechnology – III year Semester: V
 Subject Code : **19UEAZE1** Name of the Subject: Elective – **Biostatistics and Biological techniques**
 Subject In charge : Dr.K.Samyappan and Dr.R SARAIVANAN

Week	Topics to be Covered
Week -1	Collection of data, Variables, presentation of data, Tabulation-Diagrams and graphs, Bar, Pie charts
Week -2	Cell fractionation
Week -3	Frequency diagrams, frequency curve, line diagrams
Week -4	Centrifugation
Week -5	Mean, Median, Mode, Weighted Arithmetic mean
Week -6	Histochemical techniques
Week -7	Measures of Dispersion, Mean deviation, Standard deviation
Week -8	Tissue Processing
Week -9	Correlation and Regression, Equation and Lines
Week -10	Electrophoresis – Paper and Agarose gel electrophoresis
Week -11	Samples-Sampling methods, Test of significance
Week -12	Chromatography -
Week -13	Student's t-test, F-test, Chi-square test
Week -14	Calorimeter
Week -15	UV Spectrophotometer

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Advanced Zoology And Biotechnology
Teaching plan (EVEN semester – 2022 -23)

Class : B.Sc. Advanced Zoology And Biotechnology – I year Semester: II
Subject Code : **22UBAZC1** Name of the Subject: **CHORDATA**
Subject In charge : Dr.K.Samyappan, Dr N.Thirunavukkarasu and Dr K.Mohan

Week	Topics to be Covered
Week -1	General Characters of Prochordates and classification ; Chordates - Classification (upto order) with examples , Agnatha, Salient features Cyclostomes
Week -2	Type study: Amphioxus , Scoliodon
Week -3	Accessory respiratory organs in fishes, Migration in fishes
Week -4	Amphibians-General characters Type study- Frog
Week -5	Type study- Frog
Week -6	Parental care in Amphibians, Metamorphosis in Amphibians
Week -7	Reptilia-General characters Type study- Calotes
Week -8	Skull of Reptiles, Identification of Poisonous and non poisonous
Week -9	Poison Apparatus and Biting mechanism
Week -10	Aves- General characters, Pigeon - Type study
Week -11	Flight adaptations in birds, Migration in birds
Week -12	Salient features of Archaeopteryx, Flightless birds
Week -13	Mammals - General characters, Type study - Rabbit
Week -14	Prototherians (Egg laying) mammals , Diversity of Marsupials (Pouched mammals),
Week -15	Dentition in Mammals

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Advanced Zoology And Biotechnology
Teaching plan (EVEN semester – 2022 -23)

Class : B.Sc. Advanced Zoology And Biotechnology – II year Semester: IV

Subject Code : **19UDAZC1** Name of the Subject: **GENETICS**

Subject In charge : Dr.K.SAMYAPPAN AND Dr K MOHAN

Week	Topics to be Covered
Week -1	Mendelian inheritance law - Law of Mendal - Monohybrid and Dihybrid
Week -2	Gene concept - Cistron, Recon, Muton, Split gene, Promoter, Repetitive DNA, Transposons - Gene regulations - Lac operon model
Week -3	Interaction of genes - Complimentary and supplementary factors, Epistasis and Lethal genes in man
Week -4	Mutation - Types of mutation - Molecular basis of mutation- Single gene mutation - Sickle cell anemia - Physical and chemical mutagens
Week -5	Multiple alleles - Blood grouping inheritance in man Polygenic inheritance
Week -6	Chromosomal aberration Inborn errors of metabolism
Week -7	Sex determination, Chromosomal variation, Syndromes, Non Disjunction
Week -8	Microbial genetics - Bacterial genome - Transformation - Conjugation - F factor - Sexduction - Transduction - Generalised and Specialised Plasmids
Week -9	Linkage
Week -10	Crossing over
Week -11	Applied Genetics - Inbreeding - Outbreeding
Week -12	Heterosis - Eugenics - Euphenics and Euthenics
Week -13	Pedigree analysis - Genetic counselling
Week -14	Cytoplasmic inheritance
Week -15	Microbial genetics

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Advanced Zoology And Biotechnology
Teaching plan (EVEN semester – 2022 -23)

Class : B.Sc. Advanced Zoology And Biotechnology – III year Semester: VI
Subject Code : **19UFAZC1** Name of the Subject: **DEVELOPMENTAL BIOLOGY**
Subject In charge : Dr T.KUMARAN AND Dr.R.SARAVANAN

Week	Topics to be Covered
Week -1	Gametogenesis - Process of Spermatogenesis and Oogenesis
Week -2	Classification of eggs based on yolk content distribution
Week -3	Egg membranes
Week -4	Fertilization
Week -5	Parthenogenesis – Natural and Artificial Parthenogenesis
Week -6	Cleavage - Planes of cleavage - Patterns of cleavage - Factors controlling cleavage and types
Week -7	Fate map – Morphogenetic movements
Week -8	Gastrulation in frog , chick and mammal (pig)
Week -9	Development of brain and eye in frog. Development of heart in
Week -10	Extra embryonic membranes in chick, Placentation in mammals
Week -11	Human reproduction, Twins – Monozygotic and Dizygotic twins.
Week -12	Birth Control - Contraception - Contraceptive methods
Week -13	Assisted Reproductive Technology- - Artificial Insemination –
Week -14	IVF – Embryo Transfer and its advantages - Test Tube Baby – Amniocentesis
Week -15	Ethics in Artificial Reproductive Technology and embryo manipulation

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Advanced Zoology and Biotechnology
Teaching plan (EVEN semester – 2022 -23)

Class : B.Sc. **Advanced Zoology and Biotechnology** – III year Semester: V
Subject Code : **19UFAZC2** Name of the Subject: **EVOLUTION**

Subject In charge : Dr R Saravanan and Dr K Samyappan

Week	Topics to be Covered
Week -1	Origin of life - modern ideas –
Week -2	Evidences of organic evolution
Week -3	Evidences of organic evolution
Week -4	Geological time scale- Fossils & Fossilization - Living and Extinct Fossils
Week -5	Lamarck theory and its criticism
Week -6	Darwin's theory- Neo-Darwinism
Week -7	Hardy- Weinberg Law
Week -8	Modern concepts of evolutionary forces
Week -9	Adaptive radiation in Darwin's finches
Week -10	Types of speciation
Week -11	Isolation – Geographical and Reproductive isolation
Week -12	Types of isolating mechanism
Week -13	Mimicry
Week -14	Colouration
Week -15	Evolution of horse. Evolution of Man

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Advanced Zoology and Biotechnology
Teaching plan (EVEN semester – 2022 -23)

Class : B.Sc. **Advanced Zoology and Biotechnology** – III year Semester: V
Subject Code : **19UFAZC3** Name of the Subject : **APPLIED ZOOLOGY**

Subject In charge : Dr.P,Balasubramanian and Dr.N.Thirunavukkarasu

Week	Topics to be Covered
Week -1	Definition of Pest- Causes for insects attaining pest status
Week -2	Brief account on pests of affecting rice and sugarcane
Week -3	Brief account on pests of cotton , vegetables and stored grains
Week -4	Sericulture
Week -5	Apiculture
Week -6	Lac culture
Week -7	Pest control strategies
Week -8	Plant protection appliances
Week -9	Integrated Pest management
Week -10	Poultry management
Week -11	Construction of poultry house and poultry rearing
Week -12	Diseases affecting poultry and their prevention methods
Week -13	Dairy farming
Week -14	Sheep farming
Week -15	Piggery farming

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Advanced Zoology And Biotechnology
Teaching plan (EVEN semester – 2022 -23)

Class : B.Sc. Plant Biology and Plant Biotechnology – III year Semester: VI

Subject Code : **19UFAZE1**

Name of the Subject: **MEDICAL LABORATORY TECHNIQUES**

Subject In charge : Dr.M.SASIKALA AND Dr R SARAVANAN

Week	Topics to be Covered
Week -1	Introduction and scope, Good laboratory preparation, Record maintenance, Cleaning of Glass wares
Week -2	Pathology-caustic agents, symptoms, disorders
Week -3	Sterilization, safety precautions and first aid treatments
Week -4	Bacterial diseases, Tuberculosis tests, Typhoid-widal test
Week -5	Disposal of specimens, Collections of specimens and samples
Week -6	Protozoan diseases, Amoebic dysentery, Malaria
Week -7	Haematological tests, RBC, WBC Total count HB, Platelet count
Week -8	Helminth parasite diseases, Filariasis, Antibody detection
Week -9	Liver function tests, SGPT, SGOT, Bilirubin
Week -10	Cardiac diseases, ECG and Lipid profiles, Diabetes,
Week -11	Urine analysis, Analysis of Stools
Week -12	Auto immune disease, Rheumatoid arthritis
Week -13	Methods and clinical significance of ESR, PCV, MCH, MCHC
Week -14	Liver cancer, GI tract cancer, Ovarian and Breast cancer
Week -15	Pregnancy tests, Analysis of Semen, sputum and CSF

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Advanced Zoology And Biotechnology
Teaching plan (EVEN semester – 2022 -23)

Class : B.Sc. Advanced Zoology And Biotechnology – III year Semester: VI

Subject Code : **19UFAZE2**

Name of the Subject: **AQUACULTURE**

Subject In charge : Dr.I.Malaichelvi and Dr.T.Mathuram

Week	Topics to be Covered
Week -1	Introduction to aquaculture - Different culture practices
Week -2	Fish diseases - bacterial
Week -3	Types of culture - monoculture, monosex culture, polyculture
Week -4	Fish diseases - viral and parasitic diseases
Week -5	Selection of site and species for aquaculture practices
Week -6	Organization involved in aquaculture
Week -7	Fish farm design and construction
Week -8	Culture of marine and freshwater prawn - Mariculture - molluscan culture - Oyster - seaweed culture
Week -9	Types of fish pond
Week -10	Problem associated with aquaculture
Week -11	Maintenance and management of different ponds
Week -12	Culture methods - Integrated fish farming - Paddy cum fish culture, pen culture, cage culture, race way culture, sewage fed fish culture
Week -13	Feeds for cultivable species
Week -14	Induced breeding in Indian major carps
Week -15	Live feed culture - Carp culture

PG ZOOLOGY

TEACHING PLAN

2022-23

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (ODD semester – 2022 -23)

Class : M.Sc. **Zoology** - I year Semester: I
Subject Code : 22PAAZC1
Name of the Subject: **FUNCTIONAL MORPHOLOGY OF INVERTEBRATES**
Subject In charge : Dr K. MOHAN

Week	Topics to be Covered
Week -1	Principles of Animal Taxonomy, species concept
Week -2	Origin of coelome formation and its types
Week -3	Origin and Evolution of Metazoa
Week -4	Locomotion in Protozoa, pseudopodia, flagella and cilia
Week -5	Hydrostatic movement in Coelenterates and Feeding mechanism,
Week -6	Parasitic adaptation in helminthes and larval forms
Week -7	Theories on origion of metamerism
Week -8	Filter feeding in polycheata, Mollusca and Echinodermata
Week -9	Larval form and its evolutionary significance of Crustacean, Mollusca and Echinodermata
Week -10	Advanced nervous system in Annelids, Arthropods and mollusca
Week -11	Organs of excretion : nephridia, malphigian tubules.
Week -12	Organs of respiration gills, lungs and trachea
Week -13	Respiratory pigments and Mechanism of respiration in invertebrates.
Week -14	Structure and peculiarities of Minor phyla
Week -15	Affinities of Rotifera, Chaetogantha, phoronida, Endoprocta and Ectoprocta

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (ODD semester – 2022 -23)

Class : M.Sc. **Zoology** - I year Semester: I
Subject Code : **22PAAZC2**
Name of the Subject: **Comparative Anatomy of Chordates**
Subject In charge : Dr N.THIRUNAVUKKARASU

Week	Topics to be Covered
Week -1	Prochordate phylogeny-
Week -2	Evolutionary position of Ostracoderms, Placoderms in the evolution of the jawed vertebrates
Week -3	Origin and classification of vertebrates – Origin of mammals
Week -4	Vertebrate integument and its derivatives
Week -5	Evolution of heart in fishes, amphibians, reptiles, birds and mammals.
Week -6	Evolution of aortic arches and portal systems
Week -7	Comparative account of respiratory organs in fishes, amphibians, reptiles,
Week -8	Evolution of kidney and their ducts in vertebrates
Week -9	Comparative account of jaw suspensorium
Week -10	Comparison of forelimbs, hindlimbs, in amphibians, reptiles, birds and mammals
Week -11	Comparison of pectoral girdle and pelvic girdle in amphibians, reptiles, birds and mammals
Week -12	Types of vertebra and Vertebral column of vertebrates
Week -13	Sense organs – Receptors in vertebrates
Week -14	Comparative anatomy of the brain in vertebrates in relation to its functions
Week -15	Lateral line system and Electoreception in fishes

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (ODD semester – 2022 -23)

Class : M.Sc. **Zoology** - I year Semester: I
Subject Code : **22PAAZC2**
Name of the Subject: **Evolution and Animal Behaviour**
Subject In charge : Dr K SAMYAPPAN AND Dr R SARAVANAN

Week	Topics to be Covered
Week -1	Emergence of Evolutionary theories- Lamarckism and Darwinism – concepts
Week -2	Evolutionary synthesis - Modern Synthetic theory of evolution
Week -3	Molecular Evolution - Role of genes in evolution - Evolution of gene families
Week -4	Modern understanding of Natural selection
Week -5	Polymorphism- Transient and Stable- Maintenance of Polymorphism
Week -6	Patterns and trends in Evolution – Microevolution, Macroevolution and Megaevolution
Week -7	Simpson's adaptive grid. Phylogenetic gradualism and punctuated equilibrium
Week -8	Population genetics- Metapopulations - Monitoring natural populations
Week -9	Human Evolution- Evolution of Anthropoid primates – The first Hominids - Origin of Modern man
Week -10	Classification of animal behaviour – Inborn animal behaviour- (Taxis, kinesis, Reflex, Instincts) - Acquired animal behavior
Week -11	Chronobiology - Biological clock- Biological rhythms in animals
Week -12	Sociobiology - Territoriality, Aggressive behavior and Sexual and Mating behaviour among animals
Week -13	Communication in animals – Types of communication in animals- Components
Week -14	Visual communication in honey bees and birds, Auditory (Vocal /Sound) communication in birds and mammals.
Week -15	Chemical communication – Pheromones of insects, Pheromones of mammals.

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (ODD semester – 2022 -23)

Class : M.Sc. **Zoology** - I year Semester: I

Subject Code : **22PAAZEA1**

Name of the Subject: **APPLIED ENTOMOLOGY**

Subject In charge : Dr T KUMARAN

Week	Topics to be Covered
Week -1	Outline classification- Classification of insects
Week -2	Metamorphosis – ametabolous, holometabolus and hemimetabolous development
Week -3	Insect Organization and structure
Week -4	Types of damage- injuries and loss caused to plants - factors governing the outbreak of pests.
Week -5	Pests affecting agricultural crops
Week -6	Pests affecting agricultural crops
Week -7	Sericulture Grainage Technology-Procedures for seed Selection for rearing
Week -8	Silk worm rearing-Chawaki rearing and Late age rearing techniques. Rearing appliances
Week -9	Mountages- Types and importance . Composition of cocoons – Physical
Week -10	Types of Honey bees for rearing- Bee rearing- Modern bee hive structure
Week -11	Honey extractor and extraction of honey, Chemical composition, nutritional and medicinal value of honey.
Week -12	Lac culture-Host plants for lac insect, Cultivation of lac - Inoculation.Swarming and harvesting of lac). Processing of lac..
Week -13	Vector borne diseases
Week -14	Pest management strategies and tools
Week -15	Hormone analogs - Integrated Pest Management (IPM)

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (ODD semester – 2022 -23)

Class : M.Sc. **Zoology** - II year Semester: III

Subject Code : **19PAAZE1**

Name of the Subject: **MICROBIOLOGY**

Subject In charge : Dr T MATHURAM

Week	Topics to be Covered
Week -1	Contribution of scientists to microbiology - Classification of microbes
Week -2	Ultra structure of bacteria Ultra structure of fungi, Yeast, Viruses - virioids and prions
Week -3	Sterilization techniques
Week -4	Culture media - Types of culture media, Pure culture techniques
Week -5	Staining techniques
Week -6	Microbial growth - Factors influencing microbial growth
Week -7	Microbial ecology
Week -8	Application of soil beneficial microbes in agriculture
Week -9	Biofuels - Biomining
Week -10	Nitrogen fixing bacteria
Week -11	Viral diseases
Week -12	Bacterial diseases
Week -13	Antibiotics and production of antibiotics
Week -14	Microbes in food - Dairy and Non Dairy products
Week -15	Food Spoilage - Food Preservation

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (ODD semester – 2022 -23)

Class : M.Sc. Zoology - II year Semester: III
 Subject Code : **19PCAZC1**

Name of the Subject: **BIOCHEMISTRY AND BIOPHYSICS**

Subject In charge : Dr M.Sasikala

Week	Topics to be Covered
Week -1	Electronic configuration of atoms,Bonds,Covalent bonds,
Week -2	Vanderwal's force,hydrophilc and hydrophobic
Week -3	Nature of bonds,structure of biomolecules
Week -4	Structure of proteins, Ramachandran plot
Week -5	Enzymes-classification, kinetics,Inhibitory,Isoenzymes
Week -6	Carbohydrate metabolism, Bioenergetics,
Week -7	Protein metabolism,Lipid metabolism,Fattyacids
Week -8	pH,Acid base balance,Buffer system in blood
Week -9	Diffusion,Fick's&Donnan equilibrium,Osmotic pressure
Week -10	Law of Thermodynamics,entropy, enthalpy,open and closed and isolated,
Week -11	Glycogenesis, Glucuneogenesis, Glycogenolysis
Week -12	Oxidation of fatty acids, Biosynthesis of Cholesterol
Week -13	Ionizing radiation,exposure and dose,Autoradiography
Week -14	Biological effects of radiation,cellular effects
Week -15	Application of radioactive traces,radiation protection and therapy

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (ODD semester – 2022 -23)

Class : M.Sc. Zoology - II year Semester: III

Subject Code : 19PCAZC2

Name of the Subject: **ANIMAL PHYSIOLOGY**

Subject In charge : Dr V.MATHIVANNAN

Week	Topics to be Covered
Week -1	Digestion and absorption in the gastrointestinal tract
Week -2	Role of gastrointestinal hormones in digestion
Week -3	Heart - Haemodynamics, origin and conduction of cardiac impulse. Pace maker , ECG, phases of cardiac cycle
Week -4	Respiratory physiology — Respiratory gases – uptake – respiratory pigments – O ₂ and CO ₂ dissociation curves –
Week -5	Respiratory adjustments - hypoxia and oxygen therapy , dyspnoea . Adaptations at High altitude - mountain sickness and acclimatization
Week -6	Stress Physiology
Week -7	Mechanism of excretion – physiology- counter current mechanism -
Week -8	Physiological adaptation to osmotic and ionic stress; mechanism of cell volume regulation
Week -9	Acclimation and acclimatization - Physiological adaptations of different environments
Week -10	Neurons – action potential – nerve impulse transmission – neurotransmitters
Week -11	Synapse structure - synaptic transmission , Neuro-degenerative diseases.
Week -12	Muscle contraction – Theories – Contractile proteins - molecular mechanism of muscle contraction. Energetics of muscle contraction
Week -13	Thermoregulation in poikilotherms and homeotherms - Endothermy
Week -14	Physiological response to body exercise - Meditation, Yoga and their effects
Week -15	Bioluminescence: light producing organs in invertebrates and vertebrates

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (ODD semester – 2022 -23)

Class : M.Sc. Zoology - II year Semester: III

Subject Code : 19PCAZC3

Name of the Subject: **IMMUNOLOGY**

Subject In charge : Dr I MALAICHELVI

Week	Topics to be Covered
Week -1	Immunity and Types of Immunity, Lymphoid organs, Lymphocyte
Week -2	Immunogenicity, Antigenicity and Super antigens Immunoglobulins
Week -3	Organizatition and expression of Ig genes,Antibody Interaction
Week -4	Complement system, MHC and HLA antigens
Week -5	Molecular component and structure, differentiation of of T cells
Week -6	Molecular component and structure, differentiation of of B cells
Week -7	Humoral- mediated immune response
Week -8	Cell - mediated immune response, Antigen processing and presentation
Week -9	Cytokines – features, cytokines receptors
Week -10	Cell adhesion molecules, CTL and NK cell – mechanism of action
Week -11	Immunological tolerance- central , peripheral and acquired tolerance
Week -12	Hypersensitivity – types and Immunological reactions
Week -13	Autoimmunity and autoimmune diseases
Week -14	Tumor immunology-types,tumor antigens, Immune response to antigen
Week -15	Transplantation immunology, Immunological technique

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (ODD semester – 2022 -23)

Class : M.Sc. **Zoology** - II year Semester: III

Subject Code : **19PCAZE1**

Name of the Subject: **BIOINSTRUMENTATION**

Subject In charge : Dr V.MATHIVANNAN

Week	Topics to be Covered
Week -1	Units of measurements
Week -2	Electron microscope (SEM & TEM), fluorescent microscope, phase contrast microscope, photomicrography
Week -3	chromosome banding techniques (G,C,Q,R. Banding). Flow cytometry - Fluorescence in situ hybridization - (FISH)
Week -4	Centrifugation
Week -5	UV- visible spectrophotometer- Beer Lambert Law. Principle and application of Flame photometer
Week -6	X-ray diffraction
Week -7	Chromatography- Paper, thin layer, column,.
Week -8	Chromatography - Ion exchange , GC and HPLC
Week -9	Electrophoresis: Paper, Agarose gel, and SDS-PAGE
Week -10	Histological techniques- Mechanism of staining and vital stains
Week -11	Histochemical Localization- DNA, RNA, protein, lipid and carbohydrates
Week -12	cryopreservation of cells, tissues, organs and organisms
Week -13	Animal Cell Culture
Week -14	Immunotechniques - Immunodiffusion, Immuno electrophoresis,
Week -15	ELISA (Direct, Indirect and Competitive), RIA, Immunodetection - Immunoblotting technique

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (ODD semester – 2022 -23)

Class : M.Sc. Zoology - II year

Semester: III

Subject Code : **19PCAZD1**

Name of the Subject: **MAMMALIAN ENDOCRINOLOGY**

Subject In charge : Dr R SARAVANAN

Week	Topics to be Covered
Week -1	Classification of hormones based on chemical nature. Hormone secretions
Week -2	Hormone transport. Hormonal feedback in homeostasis- Negative and positive feed back mechanisms through endocrine axis.
Week -3	Mechanism of hormone action- Mechanism of action of peptide hormones
Week -4	Mechanism of action of Steroid hormones
Week -5	Hypothalamo-hypophysial system - localization, chemistry and actions
Week -6	Thyroid gland - Biosynthesis of thyroid hormones, Control of secretion and Biological functions – Disorders- Hypothyroidism, Hyperthyroidism
Week -7	Parathyroid gland- Role of parathormone, calcitonin and vitamin D in calcium homeostasis
Week -8	Endocrine pancreas
Week -9	Adrenal cortex: Structure, Hormone secretion, Biosynthesis and Control of mineralocorticoid and glucocorticoid secretions.
Week -10	Adrenal medulla: Catecholamine biosynthesis, release and its physiological
Week -11	Disorders with reference to Addisons disease and Cushing's syndrome Disorders with reference to Gigantism, Acromegaly, Diabetes insipidus
Week -12	Testis: Organization and Hormone secretion – Chemical structure of
Week -13	Ovary: Structure - Hormone secretion- Chemical structure of estrogens
Week -14	Physiological role of estrogen, progesterone and relaxin . Hormones of placenta and their functions
Week -15	Physiological roles of glucocorticoids and mineralocorticoids

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (EVEN semester – 2022 -23)

Class : M.Sc. **Zoology** - I year Semester: II
Subject Code : **22PBASBE1**
Name of the Subject: **CELL AND MOLECULAR BIOLOGY**
Subject In charge : Dr P.BALASUBRAMANIAN

Week	Topics to be Covered
Week -1	Biomembranes - Molecular composition and arrangement
Week -2	Transport across cell membrane- Diffusion, active transport and pumps
Week -3	uniports, symports and antiport - Membrane potential - Co-transport by symports or antiports
Week -4	Microfilaments and microtubules-structure and dynamics – Role of Microtubulins in mitosis
Week -5	Cell movements- intracellular transport, role of kinesin and dynein.
Week -6	Cell-cell signalling - Cell surface receptors - Second messenger system - MAP kinase pathways - Signalling from plasma membrane to nucleus
Week -7	Cell- cell adhesion and Communication
Week -8	Gap junctions and connexions
Week -9	Cell cycle - cyclins and cyclin dependent kinases, Regulation of CDK -cyclin
Week -10	Genome Organization - Unique, repetitive, Non repetitive DNA, C- value paradox
Week -11	Morphological and Functional elements of Eukaryotic Chromosomes
Week -12	Eukaryotic DNA Replication and Enzymology. DNA repair – Direct, excision, Mismatch repair and recombinational repair
Week -13	Intracellular protein traffic - Protein synthesis on free and bound polysomes Golgi sorting, post-translational modifications - Biogenesis of mitochondria and nuclei - Trafficking mechanisms
Week -14	Biology of cancer - Oncogenes - Retroviral and Proto-oncogene. Tumor suppressor genes
Week -15	Apoptosis-definition, mechanism and significance - Genes involved in apoptosis

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (EVEN semester – 2022 -23)

Class : M.Sc. **Zoology** - I year Semester: II

Subject Code : **22PBAZC2**

Name of the Subject: **MOLECULAR GENETICS**

Subject In charge : Dr K MOHAN 4

Week	Topics to be Covered
Week -1	Concept of gene
Week -2	Codominance, incomplete dominance, gene interactions, pleiotropy, genomic imprinting
Week -3	linkage and crossing over, sex linkage, sex limited and sex influenced characters
Week -4	Gene mapping methods: Linkage maps, tetrad analysis, mapping with molecular markers
Week -5	Gene mapping methods: Linkage maps, tetrad analysis, mapping with molecular markers
Week -6	Extra chromosomal inheritance: Inheritance of Mitochondrial genes
Week -7	Microbial genetics: Methods of genetic transfers
Week -8	Human genetics: Pedigree analysis, lod score for linkage testing, karyotypes, genetic disorders
Week -9	Population Genetics: Genetic equilibrium
Week -10	Mutation: Types, causes and detection, mutant types
Week -11	Structural and numerical alterations of chromosomes
Week -12	Gene Recombination : Homologous and Non-homologous recombination.
Week -13	Gene regulation – genome analysis — RNA processing
Week -14	Eukaryotic transcription – Transcription Factors and regulation
Week -15	Eukaryotic translation - Control and regulation. Post translational modifications

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (EVEN semester – 2022 -23)

Class : M.Sc. **Zoology** - I year Semester: II
Subject Code : **22PBAZC3**
Name of the Subject: **Environmental Biology and Biodiversity Conservation**
Subject In charge : Dr T KUMARAN

Week	Topics to be Covered
Week -1	Physical environment; biotic environment; biotic and abiotic interactions
Week -2	Habitat and Niche: Concept of habitat and niche; niche width and overlap; fundamental and realized niche
Week -3	Biogeochemical cycles – Gaseous and sedimentary cycle
Week -4	Population Ecology: Characteristics of a population
Week -5	concept of metapopulation
Week -6	Species Interactions: Types of interactions, interspecific competition
Week -7	Community Ecology: Nature of communities; community structure and attributes
Week -8	Ecological Succession
Week -9	Ecosystem structure and function
Week -10	Structure and function of Indian ecosystems
Week -11	Estuaries - Productivity of an estuary. Mangroves
Week -12	Environmental pollution and Bioremediation; global environmental change , e-waste management
Week -13	Biodiversity: status, monitoring and documentation; major drivers of biodiversity change; biodiversity management approaches.
Week -14	Conservation Biology: Principles of conservation, major approaches to management
Week -15	Biogeography: Major terrestrial biomes; theory of island biogeography

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (ODD semester – 2022 -23)

Class : M.Sc. Zoology - I year Semester: II

Subject Code : 22PBAZE2A

Name of the Subject: **BIOINSTRUMENTATION**

Subject In charge : Dr V.MATHIVANNAN

Week	Topics to be Covered
Week -1	Units of measurements
Week -2	Electron microscope (SEM & TEM), fluorescent microscope, phase contrast microscope, photomicrography
Week -3	chromosome banding techniques (G,C,Q,R. Banding). Flow cytometry - Fluorescence in situ hybridization - (FISH)
Week -4	Centrifugation
Week -5	UV- visible spectrophotometer- Beer Lambert Law. Principle and application of Flame photometer
Week -6	X-ray diffraction
Week -7	Chromatography- Paper, thin layer, column,.
Week -8	Chromatography - Ion exchange , GC and HPLC
Week -9	Electrophoresis: Paper, Agarose gel, and SDS-PAGE
Week -10	Histological techniques- Mechanism of staining and vital stains
Week -11	Histochemical Localization- DNA, RNA, protein, lipid and carbohydrates
Week -12	cryopreservation of cells, tissues, organs and organisms
Week -13	Animal Cell Culture
Week -14	Immunotechniques - Immunodiffusion, Immuno electrophoresis,
Week -15	ELISA (Direct, Indirect and Competitive), RIA, Immunodetection - Immunoblotting technique

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (EVEN semester – 2022 -23)

Class : M.Sc. **Zoology** - I year Semester: II

Subject Code : **22PBAZD1**

Name of the Subject: **BIostatistics and Bioinformatics**

Subject In charge : Dr K SAMYAPPAN AND Dr R SARAVANAN

Week	Topics to be Covered
Week -1	Collection and representation of data- Graphical and diagrammatic representation of data
Week -2	Measure of central tendency- Arithmetic mean - computation for (ungrouped , discrete and continuous frequency distributions) – median and mode
Week -3	Measures of dispersion- Standard deviation –Computations and Interpretations
Week -4	Hypothesis testing - null hypothesis - level of significance - degrees of freedom
Week -5	Test of significance: Chi-square test for goodness of fit, homogeneity
Week -6	Student's 't' test- Applications- Test of significance T-tests ANOVA- One way - Principle and applications , F test
Week -7	Correlation: Definition and types - simple, multiple, partial, linear, nonlinear, mutual, cause and effect, etc
Week -8	Regression analysis: derivation of regression equations between two variables- regression coefficient - construction of regression lines
Week -9	Computation of Karl Pearson's Co-efficient of correlation - testing its
Week -10	Information networks in bioinformatics- Biological databases – Nucleic acid databases - Protein sequence data bases
Week -11	Protein structural databases - MMDB, FSSP, SCOP and CATH.
Week -12	Sequence alignment - Global and local alignment - pair wise and multiple sequence alignment
Week -13	Bioinformatic tools - Homology and similarity search tools
Week -14	Molecular phylogenetics- Construction of phylogenetic tree
Week -15	Biomolecular structural visualization tools -RASMOL, SWISS PDB viewer - Data Retrieval systems- Locus Link, SRS, PubMed, Entrez

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (EVEN semester – 2022 -23)

Class : M.Sc. Zoology - II year Semester: IV
Subject Code : 19PDAZC1

Name of the Subject: **DEVELOPMENTAL BIOLOGY**

Subject In charge : Dr I MALAICHELVI

Week	Topics to be Covered
Week -1	Mechanism of gametogenesis, hormonal regulation , vitellogenesis
Week -2	Molecular events of fertilization, cell surface molecules in sperm egg recognition
Week -3	Factors affecting cleavage – molecular changes during cleavage
Week -4	Blastula formation , Morphogenetic movements,
Week -5	Embryonic fields- formation of germ layers ‘ Embryogenesis and symmetry
Week -6	Cell aggregation and differentiation in Dictyostelium – Axes and pattern formation in Drosophila
Week -7	Amphibia and chick – organogenesis – vulva formation in <i>Caenorhabditis elegans</i>
Week -8	Eye lens induction and limb development in frog, Differentiation of neurons- mammals
Week -9	Organizer concept – gradient theory and factors Embryonic induction –
Week -10	Placenta – classification and distribution , Implantation in Mammals
Week -11	Stem cells – Embryonic and adult – Application stemcell and Ethical issues
Week -12	Male and female infertility – Assisted reproductive technology
Week -13	Amniocentesis, contraceptives methods - Immunocontraceptives
Week -14	Metamorphosis in insect and Amphibia - regeneration
Week -15	Apoptosis-sensitization-and its mechanism

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (EVEN semester – 2022 -23)

Class : M.Sc. **Zoology** - II year Semester: IV

Subject Code : **19PDAZC2**

Name of the Subject: **BIOTECHNOLOGY**

Subject In charge : Dr M.SASIKALA

Week	Topics to be Covered
Week -1	recombinant DNA technology and gene cloning - Restriction enzymes and ligases. Genomic libraries - c-DNA libraries - Preparation of cDNA
Week -2	Types of vectors- Plasmids, cosmids, lambda phage vectors, shuttle vectors, YACS, BACS, Expression vectors in bacteria and eukaryotes, Cloning vector for mammalian cells - Simian Virus 40
Week -3	Screening for transformants - Characterisation of transformants
Week -4	Isolation and sequencing of DNA- Maxim- Gilbert, Sanger's dideoxy methods., PCR
Week -5	Molecular markers - RAPD, RFLP, AFLP
Week -6	Blotting techniques, DNA finger printing- Techniques and applications - Biochips and Biosensors
Week -7	Organ and Whole embryo culture Cell lines
Week -8	Somatic Animal cell fusion – Somatic Embryogenesis
Week -9	Tissue Engineering- Artificial skin and cartilage
Week -10	Human gene therapy- Types and Methods of gene therapy
Week -11	Design of bioreactor – Stages involved in fermentation process
Week -12	Fermentation products- Primary metabolites and Secondary metabolites
Week -13	Production and industrial applications of primary metabolites
Week -14	Immobilized enzymes and applications Enzymes technology - Industrial applications and uses of microbial enzymes
Week -15	Biotechnology Regulations- Biosafety- Hazards of Genetically modified organisms (GMO's) and GM foods .

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (EVEN semester – 2022 -23)

Class : M.Sc. Zoology - II year Semester: IV
Subject Code : 19PDZE1

Name of the Subject: **RESEARCH METHODOLOGY**

Subject In charge : Dr N.THIRUNAVUKKARASU AND Dr R SARAIVANAN

Week	Topics to be Covered
Week -1	Concepts of research
Week -2	Types of research
Week -3	Research formulation
Week -4	Defining and formulating the research problem
Week -5	Sample designs- Characteristics and different types of sample design.
Week -6	Data collection techniques
Week -7	Hypothesis- Null and alternate hypothesis, testing the hypothesis –Theory and principle
Week -8	Literature review
Week -9	Abstracting and indexing sources, reviews, monographs
Week -10	Sources of information - primary and secondary sources
Week -11	Scientific writing- characteristics - Presentation techniques
Week -12	Reference styles- Harvard and Vancouver systems.
Week -13	Project proposal writing
Week -14	Laboratory safety and IPR
Week -15	Bioethics: Working with man and animals - consent - animal ethical committees and constitution.

DEPARTMENT OF ADVANCED ZOOLOGY AND BIOTECHNOLOGY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Zoology
Teaching plan (EVEN semester – 2022 -23)

Class : M.Sc. Zoology - II year Semester: IV

Subject Code : 19PDAZE2

Name of the Subject: **AQUACULTURE**

Subject In charge : Dr T MATHURAM

Week	Topics to be Covered
Week -1	Importance of Aquaculture - Present status, prospects and scope in India
Week -2	Types of Aquaculture
Week -3	Types of fish culture, Topography, site selection
Week -4	Control of parasites, predators Fish farm implements
Week -5	Fish feed and seed production - Hatchery techniques for freshwater organisms
Week -6	Shrimp Hatchery techniques - Shrimp culture technology
Week -7	Brackish water fish culture - Oyster culture
Week -8	Economic importance of lobster, sea urchin and sea cucumber
Week -9	Types of sea weeds
Week -10	Fish and Shrimp diseases and health management
Week -11	Non-infectious - environmental and nutritional diseases
Week -12	Different types of crafts and gears for fishing
Week -13	By products of fish industry
Week -14	Fisheries economics and marketing
Week -15	Central aquaculture research organization

Department of Defence and Strategic Studies

Lesson Plan (ODD Semester – 2022– 2023)

Class: B.A Defence and Strategic Studies

Semester: I Semester

Name of the Subject: Strategic Study of India

Staff In-charge: Mr. ANOOP AJITH M

Week	Topics to be covered	Method
Week 1	Introduction / Explanation of basic terms India, Bharat, Hindustan	Lecture
Week 2	India's Freedom struggle	Lecture
Week 3	Geo-Strategic location of India – Size, Borders.	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	India's Physiographic Features – Himalayas, Indo-Gangetic plain and Deccan Plateau	Lecture
Week 6	India's Ethnic and Linguistic Composition	Lecture
Week 7	System of Governance, Salient features of Indian Constitution	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	National Flag, National Anthem.	Lecture
Week 10	National Institutions	Lecture
Week 11	Power Resources	Lecture
Week 12	Agricultural, Industrial, Natural.	Lecture
Week 13	Military Potential, Defence Industries	Lecture
Week 14	Institutions of DRDO	Lecture
Week 15	Model Exam	

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (ODD Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: I Semester

Name of the Subject: Fundamentals of War and Peace

Staff In-charge: Mr. AKSHAY KUMAR M S A

Week	Topics to be covered	Method
Week 1	Introduction - Nomenclature and understanding of the terms Military Science, Military Studies, War Studies, Peace Studies, Conflict Studies	Lecture
Week 2	Defence Studies and Defence and Strategic Studies Relevance and significance	Lecture
Week 3	Basic Concepts: War, Strategy, Grand Strategy, Tactics, Campaign, Battle, Operations, Defence and Security	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Categorization of War: Civil war, Limited war, Chemical and Biological war, nuclear war,	Lecture
Week 6	Guerrilla war, Insurgency and Low Intensity Conflicts	Lecture
Week 7	Causes of War, Principles of War	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Understanding of Peace - Meaning, Definition and Forms of Peace	Lecture
Week 10	Role of Peace Education and Peace Movements	Lecture
Week 11	Concepts of Peaceful Co-existence & Zone of Peace	Lecture
Week 12	Mechanics of War and Peace - Amicable Settlement of International Disputes	Lecture
Week 13	International Law and Peace, Peace Treaties, International Court of Justice	Lecture
Week 14	Concepts of Peace Making, Peacekeeping & Peace Building	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (ODD Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: I Semester

Name of the Subject: Political Science - An Introduction – I

Staff In-charge: Ms. ARCHANAA K K

Week	Topics to be covered	Method
Week 1	Political Science as a discipline-Meaning and Definition- Nature and Scope	Lecture
Week 2	Is Politics a Science or Art, Methods of Political Science	Lecture
Week 3	State Definition, Element and Functions of State, Distinction between State and Government	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Distinction between State and Society and Association	Lecture
Week 6	Divine Origin Theory-force Theory	Lecture
Week 7	Social Contact Theory: Hobbes, Locke and Rousseau	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Patriarchal and Matriarchal theory, Historical or Evolutionary Theory	Lecture
Week 10	Sovereignty-Definition and Kinds of Sovereignty	Lecture
Week 11	Austin's Theory of Sovereignty-The concept of Pluralism	Lecture
Week 12	Law: Meaning and Features	Lecture
Week 13	Rights: Kinds and Fundamental Rights	Lecture
Week 14	Its kinds and safeguards-Equality: Relation with Liberty and Rights	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (Even Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: II Semester

Name of the Subject: History of Freedom Movement in India (1857 – 1947)

Staff In-charge: Mr. ANOOP AJITH M

Week	Topics to be covered	Method
Week 1	Sepoy Mutiny 1857	Lecture
Week 2	Factors leading to the rise of Nationalism, Formation of the Indian National Congress, Partition of Bengal	Lecture
Week 3	Birth of Muslim League, Causes for the rise of Extremism	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Swadeshi Movement, Terrorist Movement, Home Rule Movement, Anne Besant	Lecture
Week 6	Rowlett Bill, Jallian Wala bagh Massacre, Khilafat Movement	Lecture
Week 7	Gandhian Era- Non-Cooperation Movement, Swaraj Party, Simon Commission,	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Nehru. Report- Lucknow Pact, Round Table Conference- Gandhi Irwin Pact	Lecture
Week 10	Salt Satyagraha, Cripps Mission, INA and Subash Chandra Bose,	Lecture
Week 11	Quit India Movement, Demand for Pakistan	Lecture
Week 12	Wavell Plan, The Cabinet Mission	Lecture
Week 13	Rajaji Plan, Mount Batten Plan,	Lecture
Week 14	Partition of India- Indian Independence	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (Even Semester – 2022– 2023)

Class: B.A Defence and Strategic Studies

Semester: II Semester

Name of the Subject: World Military History

Staff In-charge: Mr. M. S. A. Akshay Kumar

Week	Topics to be covered	Method
Week 1	Military system in Ancient Greece - Greek Military Organization	Lecture
Week 2	Greco-Persian War (Battle of Marathon, Thermopylae and Salamis)	Lecture
Week 3	Rise of Alexander's Empire (Battle of Isus, Arbela)	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Military System in Ancient Rome - Roman Military organization, Rome- Carthage Conflict (Battle of Cannae, Zama)	Lecture
Week 6	Julius Caesar's Military Campaigns	Lecture
Week 7	Military System in Medieval Empire, Military Reforms of Gustavus Adolphus, French Revolution – Causes and Consequences	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Napoleon's art of war (Battle of Trafalgar and Waterloo)	Lecture
Week 10	World War I – Causes, Trench and Static Warfare, Use of Gas.	Lecture
Week 11	Role of Naval and Air Power	Lecture
Week 12	Military lessons	Lecture
Week 13	World War II – Causes, Blitzkrieg Tactics	Lecture
Week 14	Role of Air Power and Naval Power, Military Lessons	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (ODD Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: III Semester

Name of the Subject: International Relations

Staff In-charge: Mr. ANOOP AJITH M

Week	Topics to be covered	Method
Week 1	Introduction to International Relations	Lecture
Week 2	Components of State, Evolution of State system	Lecture
Week 3	State System and its corollaries	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Elements of National Power, National Interest, Foreign Policy	Lecture
Week 6	Theories of International Relations - Idealist	Lecture
Week 7	Theories of International Relations – Realist, Integration and Behavioralist	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Diplomacy - Concept of Diplomacy	Lecture
Week 10	Kinds of Diplomacy	Lecture
Week 11	Functions of Diplomacy	Lecture
Week 12	Control of International Relations - Collective Security	Lecture
Week 13	Balance of Power	Lecture
Week 14	International Law	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (ODD Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: III Semester

Name of the Subject: Specialized Warfare

Staff In-charge: Mr. AKSHAY KUMAR M S A

Week	Topics to be covered	Method
Week 1	Psychological Warfare - Definition and nature of Psychological Warfare	Lecture
Week 2	Types of Propaganda, Brain washing and its effect	Lecture
Week 3	Rumour: Nature and techniques	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Nuclear, Biological and Chemical Warfare - Concept and objectives	Lecture
Week 6	Characteristics	Lecture
Week 7	Types of agents and Methods of Use, Recent Trends	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Guerilla Warfare (a) Concept and objectives Characteristics Guerilla Warfare	Lecture
Week 10	Elementary knowledge of Insurgency and Counter Insurgency	Lecture
Week 11	Cyber Warfare – Concept and Objective	Lecture
Week 12	Cyber Warfare - Characteristics	Lecture
Week 13	Terrorism – Definition, Causes	Lecture
Week 14	Types of Techniques	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (Even Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: IV Semester

Name of the Subject: Geo-Politics and Geo-Strategy

Staff In-charge: Mr. AKSHAY KUMAR M S A

Week	Topics to be covered	Method
Week 1	Fundamentals of Geo-Strategy (Accessibility, Visibility, Location, Distance, Climate)	Lecture
Week 2	Role and Importance of Geo – politics	Lecture
Week 3	Geographic components of National Power.	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Geo – Political Thought, Theories of Mackinder	Lecture
Week 6	Theories of Haushofer, A.T. Mahan.	Lecture
Week 7	Basics of Military Geography, Basics of Global Positioning System (GPS),	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Global Information System (GIS) and Remote Sensing.	Lecture
Week 10	Geo – Strategic significance of India: Geographical Location	Lecture
Week 11	Natural resources, Land mass, Rivers, Minerals & Oil	Lecture
Week 12	Importance of Andaman, Nicobar & Lakshadweep Islands.	Lecture
Week 13	India's Borders (a) Nature and characteristics of land borders, Maritime boundaries	Lecture
Week 14	Concept of Territorial waters and Exclusive Economic Zone.	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (Even Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: IV Semester

Name of the Subject: International Organisation

Staff In-charge: Ms. ARCHANAA K K

Week	Topics to be covered	Method
Week 1	Introduction - Evolution of International Organization	Lecture
Week 2	Overview of related theories.	Lecture
Week 3	League of Nation, UN System: Principles, Powers	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	UN Structures, Objectives, Functioning	Lecture
Week 6	Evaluation of SAARC	Lecture
Week 7	Objectives, Functioning and Evaluation of ASEAN, Asian Regional Forum (ARF)	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Salient Features of European Union (EU)	Lecture
Week 10	Organization for Security & Cooperation in Europe (OSCE).	Lecture
Week 11	Fundamentals of African Union (AU)	Lecture
Week 12	Commonwealth of Independent States (CIS)	Lecture
Week 13	Organization of Islamic Conference (OIC),	Lecture
Week 14	Organization of American States (OAS).	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (ODD Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: V Semester

Name of the Subject: National Security of India

Staff In-charge: Mr. ANOOP AJITH M

Week	Topics to be covered	Method
Week 1	Introduction: (a) India's national values	Lecture
Week 2	National security objective, India's Foreign policy goals	Lecture
Week 3	Internal Security Threats – Poverty, Communal harmony, Corruption	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Insurgency in North East.	Lecture
Week 6	Issues with Pakistan: (a) Jammu & Kashmir	Lecture
Week 7	Siachen, Sir Creek Island, Wullar Barrage & Terrorism	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Issues with China: (a) Boundary dispute	Lecture
Week 10	Misperceptions on Tibet	Lecture
Week 11	Non – recognition of Sikkim.	Lecture
Week 12	Indian Ocean: (a) Strategic significance	Lecture
Week 13	India's interests	Lecture
Week 14	Power rivalry (militarization).	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (ODD Semester – 2022– 2023)

Class: B.A Defence and Strategic Studies

Semester: V Semester

Name of the Subject: Terrorism

Staff In-charge: Mr. ANOOP AJITH M

Week	Topics to be covered	Method
Week 1	Definition and meaning of Terrorism. History of Terrorism.	Lecture
Week 2	Nature and Tactics of Terrorism	Lecture
Week 3	Causes of Terrorism, Types of Terrorism, Levels of Terrorism	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Kashmir- Cross-border terrorism - Lashkar-e-Toiba; Talibans	Lecture
Week 6	Extremism in North-East India.	Lecture
Week 7	Naxalites in India, Parliament & Mumbai Taj hotel attack.	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Palestinian Issue, Irish Issue	Lecture
Week 10	Sri Lanka- LTTE Issue	Lecture
Week 11	September 11 attack in the USA -Al Qaeda.	Lecture
Week 12	War against Terrorism- responses of Major Powers.	Lecture
Week 13	Terrorism and United Nations Organisation.	Lecture
Week 14	Terrorism and other International Organisations	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (ODD Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: V Semester

Name of the Subject: Basics of Defence Economics

Staff In-charge: Mr. AKSHAY KUMAR M S A

Week	Topics to be covered	Method
Week 1	Introduction - Definition of Economics and Defence Economics	Lecture
Week 2	Introduction: (a) Definition of Economics and Defence Economics	Lecture
Week 3	Defence and Development debate, Defence Budget - Concepts of Finance, Revenue, Expenditure, process of Budget	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	National Income and Gross National Product	Lecture
Week 6	Analysis of India's Defence Budget	Lecture
Week 7	Defence Planning - Parameters of Defence Planning, Use of Systems Analysis, Cost – effectiveness in selection of weapon systems	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Defence Production, Assessment of Defence requirements	Lecture
Week 10	Role of Ordnance Factories and Public and Private sector undertakings	Lecture
Week 11	Contribution of DRDO.	Lecture
Week 12	Effects of War on Economy, Inflation	Lecture
Week 13	Balance of Payments.	Lecture
Week 14	Mobilization of Resources	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (ODD Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: V Semester

Name of the Subject: Defence Mechanism of India

Staff In-charge: Mr. AKSHAY KUMAR M S A

Week	Topics to be covered	Method
Week 1	Introduction: (a) Defence as a primary function of a nation-state,	Lecture
Week 2	Higher Defence Organization of India	Lecture
Week 3	Power of President in relation to Armed Forces	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Composition and Functioning of Defence Committee during war and peace,	Lecture
Week 6	Organization & Function of Ministry of Defence, Chief of Staff and Joint Service Organizations.	Lecture
Week 7	Field & Static organizations of Indian Army, Indian Air Force, Indian Navy	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Role and Functions of Para Military Forces.	Lecture
Week 10	Organization & Function of various Indian Intelligence Agencies.	Lecture
Week 11	Study of Higher Defence Organizations of USA, Russia,	Lecture
Week 12	Study of Higher Defence Organizations of China and Pakistan.	Lecture
Week 13	Recruitment Organizations: System and methods of recruitment in Army, Navy	Lecture
Week 14	Recruitment Organizations: System and methods of recruitment in Airforce	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (ODD Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: V Semester

Name of the Subject: Fundamentals of Defence Journalism

Staff In-charge: Ms. ARCHANAA K K

Week	Topics to be covered	Method
Week 1	Introduction to Journalism: Meaning, relevance and scope	Lecture
Week 2	News Organization Structure and functioning	Lecture
Week 3	Media: concept, kind and characteristics.	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Defence News - Purpose and meaning, Kinds and sources Theories of news selection.	Lecture
Week 6	Reporting Defence Stories - Format, Language and Grammar, Kinds: Eye Witness, Computer assisted Features	Lecture
Week 7	Concepts of Graphics and animation, Interviewing skills.	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Editing - Abbreviations and definition of military terms	Lecture
Week 10	Proof – reading symbols	Lecture
Week 11	Caption writing and picture editing.	Lecture
Week 12	Hurdles in Defence writing Media Ethics, Media Laws	Lecture
Week 13	Military vs Media debate.	Lecture
Week 14	News Photography	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,
CHENNAI 600 039.**

Department of Defence and Strategic Studies

Lesson Plan (Even Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: VI Semester

Name of the Subject: Elementary Strategic Thought

Staff In-charge: Ms. ARCHANAA K K

Week	Topics to be covered	Method
Week 1	Introduction - Concept and components of strategic thought	Lecture
Week 2	Contributions of Kautilya's (Philosophy of War).	Lecture
Week 3	Gandhi (Non-Violence) and Nehru (Non-Alignment).	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	18th Century thinkers – Introduction, Jomini: Concept of Mass army, Strategy, Tactics and Logistics	Lecture
Week 6	Clausewitz. : War and its relationship with Politics.	Lecture
Week 7	Thinkers up to World War I: Karl Marx, military concept of social revolution	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Strategic thoughts between two World wars	Lecture
Week 10	Liddell Hart: Total War, Deterrence & British concept of Warfare	Lecture
Week 11	A.T. Mahan: Theory of Sea Power	Lecture
Week 12	Douhet, Mitchell & Seversky: Theories of Air warfare.	Lecture
Week 13	Thinkers after World War II,	Lecture
Week 14	Mao, Che Guevara - Guerrilla Warfare.	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (Even Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: VI Semester

Name of the Subject: Indian Military Operations (Since 1947)

Staff In-charge: Mr. ANOOP AJITH M

Week	Topics to be covered	Method
Week 1	Introduction - Partition of British Indian Army	Lecture
Week 2	Early Challenges - Annexation of Junagadh – 1947	Lecture
Week 3	Operations Polo (Integration of Hyderabad 1948), Operation Vijay (Integration of Goa 1961).	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Operation in Kashmir – 1947 – 48, Events leading to annexation	Lecture
Week 6	Operations of Indian Army, Military lessons	Lecture
Week 7	Chinese invasion of India – 1962 - Causes of War, Important Operations of War, Military Re – organization	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Indo – Pakistan War of 1965: Outline of the Operations	Lecture
Week 10	Role of Artillery, Operation Cactus- Lily	Lecture
Week 11	Liberation of East Pakistan 1971- Origin	Lecture
Week 12	Liberation of East Pakistan 1971 - Causes of War	Lecture
Week 13	Internal Security Operations - Operation Blue Star – 1984	Lecture
Week 14	Operation Rhino (Northeast Region), Operation Vijay	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,
CHENNAI 600 039.**

**Department of Defence and Strategic Studies
Lesson Plan (Even Semester – 2022 – 2023)**

Class: B.A Defence and Strategic Studies

Semester: VI Semester

Name of the Subject: Nuclear Strategy and Arms Control

Staff In-charge: Ms. AKSHAY KUMAR M S A

Week	Topics to be covered	Method
Week 1	Introduction - The evolution of the nuclear era since 1945	Lecture
Week 2	Basics of Nuclear technology	Lecture
Week 3	Nuclear energy & effects of nuclear explosion.	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Development of missiles, Classifications and characteristics	Lecture
Week 6	Brief study of theories of nuclear warfare: Preventive war, Pre-emptive Attack,	Lecture
Week 7	Massive Retaliation, Counter force, Flexible Response, MAD & MAS	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Elementary study of Treaties: (a) Nuclear – weapon Treaties, (PTBT, TBT, PNET & CTBT)	Lecture
Week 10	Nuclear arms Limitation Treaties (ABMT, SALT, INF, START)	Lecture
Week 11	Nuclear – Weapon proliferation Treaties (NTP, MTCR).	Lecture
Week 12	Conventions of Chemical Weapons, Biological Weapons	Lecture
Week 13	Prevention of Accidental Wars.	Lecture
Week 14	India's contribution in the process of arms control.	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (Even Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: VI Semester

Name of the Subject: World Conflicts Since World War II

Staff In-charge: Mr. ANOOP AJITH M

Week	Topics to be covered	Method
Week 1	Europe (a) Czechoslovakian crisis 1968	Lecture
Week 2	East European Revolution 1989.	Lecture
Week 3	West Asia (a) Arab – Israeli Conflict of 1948	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Arab – Israeli Conflict of 1956	Lecture
Week 6	Arab – Israeli Conflict of 1967	Lecture
Week 7	Arab – Israeli Conflict of 1973	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Gulf (a) Iraq – Kuwait Crisis 1991	Lecture
Week 10	Afghan War 2001.	Lecture
Week 11	Latin America	Lecture
Week 12	Cuban Missile Crisis 1962	Lecture
Week 13	Grenada Crisis 1983.	Lecture
Week 14	Africa: Nigerian Civil war.	Lecture
Week 15	Model Exam	

**DR. AMBEDKAR GOVERNMENT ARTS COLLEGE, (AUTONOMOUS),
VYASARPADI,**

CHENNAI 600 039.

Department of Defence and Strategic Studies

Lesson Plan (Even Semester – 2022 – 2023)

Class: B.A Defence and Strategic Studies

Semester: VI Semester

Name of the Subject: Principles of Defence Management

Staff In-charge: Mr. M. S. A. Akshay Kumar

Week	Topics to be covered	Method
Week 1	Introduction to Defence Management	Lecture
Week 2	Definition of administration and management	Lecture
Week 3	Principles and process of defence management.	Lecture
Week 4	Internal Exam - I	Assignment / Student Seminar
Week 5	Planning - Definition and features, Steps in planning, Management by objectives	Lecture
Week 6	Decision Making process and techniques.	Lecture
Week 7	Organizing – Structure, Function of military organizations	Lecture
Week 8	Internal Exam - II	Assignment / Student Seminar
Week 9	Characteristics of Military Organization	Lecture
Week 10	Staffing - Sources of Manpower supply	Lecture
Week 11	Selection process for officers and other ranks in Indian Armed Forces	Lecture
Week 12	Selection process for officers and other ranks Para-Military Forces	Lecture
Week 13	Directing and controlling - Military leadership	Lecture
Week 14	Parameters of morale and motivation. Control techniques	Lecture
Week 15	Model Exam	

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (ODD SEMESTER- 2022-23)

Class: BBA III year (Semester V)
Subject Code: 20UEBBC1
Name of the Subject: RESEARCH METHODS IN BUSINESS
Subject In charge: Dr.P.MURUGESAN

Week	Topics to be covered
Week -1	Meaning of research – Objectives of research – Types of research – Research approaches
Week -2	Scope and significance of research – Research process.
Week -3	Research Problem – Problem definition – Need – Technique in defining problem
Week -4	Formulation of hypothesis –Research Design – Meaning – Purpose
Week -5	Types of Sampling Techniques – Meaning – Probabilistic and non-probabilistic sample designs
Week -6	Data Collection Methods – Primary and secondary sources of data collection
Week -7	Observation methods, Interview methods
Week -8	Questionnaires, Schedules - Guidelines for Questionnaire design and interviewing
Week -9	Advantages and disadvantages of various data collection methods.
Week -10	Processing and Analysis of Data
Week -11	Editing, coding and classification of data
Week -12	Presentation and Research Report –
Week -13	Purpose of the written report
Week -14	Basics of written reports
Week -15	Layout of research report -Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (ODD SEMESTER- 2022-23)

Class: BBA III year (Semester V)
Subject Code: 20UEBBC2
Name of the Subject: ACCOUNTING FOR MANAGEMENT
Subject In charge: MRS.H.SHARMILA

Week	Topics to be covered
Week -1	Management Accounting – Meaning – Definition – Nature and Scope – Utility and Limitations – Management Accounting Principles
Week -2	Functions of Management Accounting – – Management Accounting and Financial Accounting – Cost Accounting and Management Accounting. (Theory)
Week -3	Financial Statements – Meaning and types of Financial Statements – Analysis and interpretation of Financial Statements
Week -4	Types of Financial Statement Analysis – Steps involved in Financial Statement Analysis
Week -5	Techniques of Financial Statement Analysis – Uses and Limitations of Financial Statement Analysis.
Week -6	Ratio Analysis – Meaning of Ratios – Classification of Ratios- Analysis and Interpretation of different Ratios – Profitability Ratios – Coverage Ratios – Turnover Ratios
Week -7	Financial Ratios – Uses and Limitations of Ratio Analysis.
Week -8	Funds Flow Analysis – Meaning of Funds Flow Statement – Uses of Funds Flow Statement
Week -9	Preparation of Funds Flow Statement – Cash Flow Analysis
Week -10	Meaning – Uses – Preparation of Cash Flow Statement
Week -11	Marginal Costing – Meaning – Definition – Uses
Week -12	Limitations – CVP Analysis
Week -13	Marginal Costing Equations – Contribution
Week -14	Break Even Analysis – P/V Ratio
Week -15	Margin of safety- Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (ODD SEMESTER- 2022-23)

Class: BBA III year (Semester V) Subject Code: 20UEBBC3 Name of the Subject: ENTREPRENEURIAL DEVELOPMENT Subject In charge: MRS.S.MONISHA
--

Week	Topics to be covered
Week -1	Entrepreneurship – Meaning and Definition –Importance
Week -2	Entrepreneurship Theories – Sociological, Economic, Psychological and Managerial Theories
Week -3	Entrepreneurship – Problems and Prospects in India
Week -4	Entrepreneurial Skills – Entrepreneurial -Entrepreneurship Vs Intrapreneurship.
Week -5	The Entrepreneur – Characteristics and Importance – Role of an Entrepreneur
Week -6	Classification of Entrepreneurs – Entrepreneurial Traits and Motivation
Week -7	Success stories of some Indian Entrepreneurs.
Week -8	Rural, International, Group Entrepreneurs.,
Week -9	Social Entrepreneurs and Corporate Entrepreneurs.
Week -10	Indigenous entrepreneurship with Examples
Week -11	Women Entrepreneurship – Entrepreneurship in Backward Region.
Week -12	Entrepreneurship development programme
Week -13	Designing Entrepreneurship Awareness Programme
Week -14	Designing comprehensive EDPs – Evaluation and EDPs – EDPs in India
Week -15	Formulation of Project– Government, Financial and NGOs- Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (ODD SEMESTER- 2022-23)

Class: BBA III year (Semester V)
Subject Code: 20UEBBC4
Name of the Subject: VALUES AND ETHICS FOR BUSINESS
Subject In charge: Dr.P.MURUGESAN

Week	Topics to be covered
Week -1	Introduction to Values – as ideals that guide one’s behavior reflecting what one perceives as good in a decision or action
Week -2	Values guide behavior and could be terminal goals - Morals Value and Vision statements in organizations
Week -3	Ethics as the art of choosing between right and wrong – Interpreting the consequences and choosing the right
Week -4	Ideas of freedom of choice, equality, justice, fairness in dealing with customers, society, environment
Week -5	Application of Values and ethics in business – Examples from Business-Government interactions: Use and Misuse of government incentives, subsidies and licenses
Week -6	Tax evasions How to be ethical and still do good business-
Week -7	Cartels between sellers, misleading advertisements; Policies relating to exchange and return of goods sold
Week -8	Examples in Production: Poor quality, risky products, defective/un tested products, unauthorized copies/imitations
Week -9	Quality Policy: Zero defect and quality of ingredients, components
Week -10	ISI, AG Marks
Week -11	Hall Mark, Patents-implications
Week -12	Copy rights, post-sales services
Week -13	Consumer Protection Act 1986 and some of the best Industry Practices
Week -14	Code of Conduct for professions (Professional Ethics).
Week -15	Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (ODD SEMESTER- 2022-23)

Class: BBA III year (Semester V)
Subject Code: 20UEBBE1
Name of the Subject: ORGANISATIONAL BEHAVIOR
Subject In charge: MRS.H.SHARMILA

Week	Topics to be covered
Week -1	Organisational Behaviour – Concept – Nature - Organizational Behaviour Models and other similar fields of study
Week -2	Disciplines contributing to Organisational Behaviour
Week -3	Individual Behaviour – Perception – Personality – Group Dynamics
Week -4	Formal and Informal Groups, Group Norms, Group Cohesiveness
Week -5	Group Behaviour and Group Decision – making.
Week -6	Leadership – Concept – Qualities of effective Leadership
Week -7	Leadership Styles. Power and Authority
Week -8	Definition of Power – Types of Power
Week -9	Definition of Authority – Characteristics – Types of Authority
Week -10	Morale -Concept – importance -
Week -11	Morale and Productivity
Week -12	Measurement of Morale
Week -13	Steps to improve Morale in an organization.
Week -14	Motivation – Concept – Nature – significance - Theories of Motivation – Maslow's need hierarchy theory
Week -15	McGregor's theory X and Theory Y – Herzberg Two Factor Theory- Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (ODD SEMESTER- 2022-23)

Class: BBA II year (Semester III) Subject Code:21UCBBC1 Name of the Subject: PRODUCTION AND QUALITY ASSURANCE MANAGEMENT Subject In charge: MRS.H.SHARMILA

Week	Topics to be covered
Week -1	Production planning and control – Material requirement
Week -2	Forecasting Inventory – Scheduling and control of production
Week -3	Just-in-time production – PERT – Production, Continuous processing.
Week -4	Different dimension of Quality – Control to quality assurance
Week -5	SQC – Deming theory- Illustrations and examples.
Week -6	Sampling inspection plans – Quality improvement teams
Week -7	TQM – Quality audit – Standards – ISO-9000
Week -8	Reliability and Maintainability – The 80-20 principle applicable
Week -9	Quality standards for services
Week -10	Quality audit and implications
Week -11	Total quality and safety –
Week -12	Six sigma
Week -13	Quality assurance- Productivity
Week -14	Quality assurance -Continuous improvement
Week -15	Examples of implementation of ISO standards in various organizations- Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (ODD SEMESTER- 2022-23)

Class: BBA II year (Semester III)
Subject Code: 21UCBBC2
Name of the Subject: HUMAN RESOURCE MANAGEMENT
Subject In charge: MRS.S.MONISHA

Week	Topics to be covered
Week -1	Introduction to Human Resource Management – Features of HRM – Characteristics
Week -2	Objectives – Importance – Scope of HRM – Functions of HRM
Week -3	Human Resource Manager – Qualities required
Week -4	Human Resource Planning – Steps in human resource planning
Week -5	Recruitment and selection – Importance of recruitment – Recruitment process
Week -6	Sources of recruitment – Factors affecting recruitment – Process of selection – Tests – Interviews
Week -7	Training and development – Features of training
Week -8	Principles – Objectives – Benefits
Week -9	Methods of training – On the job – off the job
Week -10	Compensation – Objectives – Determinants
Week -11	Methods of wage payment – Financial – Non-financial – Incentives – Features,
Week -12	Types of incentive plans/benefits -Performance appraisal –
Week -13	Features of performance appraisal – Objectives
Week -14	Need for performance appraisal
Week -15	Methods of performance appraisal – Merits – Demerits -Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (ODD SEMESTER- 2022-23)

Class: BBA II year (Semester III)
Subject Code: 21UCBBC3
Name of the Subject: MARKETING MANAGEMENT
Subject In charge: Dr.P.MURUGESAN

Week	Topics to be covered
Week -1	Introduction to marketing – Nature and functions of marketing
Week -2	Scope of marketing – Modern concept of marketing – Importance of marketing
Week -3	Market segmentation- Presentations , illustrations and examples.
Week -4	Product – Concept of product – Classification of products – Product policy – Product mix
Week -5	Product life cycle – Product planning and development
Week -6	Branding, Packaging, Labeling
Week -7	Pricing – Objectives of pricing – Factors affecting price of a product/service
Week -8	Methods of pricing – Price discrimination.
Week -9	Promotion – Nature and importance of promotion – Types of promotion
Week -10	Promotion mix – Factors affecting promotion mix decisions.
Week -11	Distribution – Channels of distribution – Meaning, importance – Types of distribution channels
Week -12	Choice of distribution channels
Week -13	Wholesaling and retailing
Week -14	Middlemen and their functions
Week -15	Types of retailing -Retailing in India-Examples and discussions-Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (ODD SEMESTER- 2022-23)

Class: BBA II year (Semester III)
Subject Code: 21UCBBC4
Name of the Subject: FINANCIAL MANAGEMENT
Subject In charge: MRS.S.MONISHA

Week	Topics to be covered
Week -1	Finance – Nature – Scope – Importance – Financial Management – Scope – Function of Financial Manager – Objectives of Financial Management
Week -2	Financial control – Tools of Financial control – Role of Financial controller.(Theory)
Week -3	Capital structure – Meaning and Definition – Capital gearing – Factors Influencing the pattern of Capital structure
Week -4	Trading on Equity – Essentials of Capital structure – Estimating Total capital requirements – Determination of the optimal capital structure
Week -5	Cost of Capital – Meaning and Definition – Basic assumptions – Importance
Week -6	Classification – Approaches to calculate Cost of Equity Capital
Week -7	Preference share - Problems
Week -8	Debts – Problems
Week -9	Computation of overall Cost of Capital- Problems
Week -10	Dividend Policies – The Walter’s Approach – Gordon’s Model – Dividend Capitalization Model
Week -11	Modigliani and Miller (MM) Hypothesis – Dividend practices – Determinants of Dividend Policy
Week -12	Working Capital Management – Working Capital – Concepts and Definition – Need – Types the Cash conversion cycle
Week -13	Managing the Components of Working Capital
Week -14	Sources of Working Capital
Week -15	Estimating Working Capital requirements –problems- Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (ODD SEMESTER- 2022-23)

Class: BBA I year (Semester I)
Subject Code:22UABBC1
Name of the Subject: FUNDAMENTALS OF MANAGEMENT
Subject In charge: MRS.S.MONISHA

Week	Topics to be covered
Week -1	Concept of management – nature – scope – function at various levels of management – contributions of Taylor
Week -2	Fayols', hawthons – approaches – social system – decision theory – management science – human behaviour – systems situational – management vs administration
Week -3	Functions of management – concept of planning – nature and importance
Week -4	Types of planning – mission – objectives – decision making – types – problem solving
Week -5	Approaches for problem solving – strategy – formulation – implementation – policy – procedures – rules – project – budget
Week -6	Organising – concept – factors affecting -organisation structure
Week -7	Forms of organisation structure -Span of Management
Week -8	Departmentation – delegation – decentralization
Week -9	Staffing – concept – job analysis –
Week -10	Training and development
Week -11	Motivation –meaning and importance- Maslow's theory
Week -12	Leadership- meaning and types of leader
Week -13	Directing – concept – supervision
Week -14	Controlling – steps in controlling
Week -15	Co-ordination- Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (ODD SEMESTER- 2022-23)

Class: BBA I year (Semester I)
Subject Code: 22UABBC2
Name of the Subject: FINANCIAL ACCOUNTING
Subject In charge: Dr.P.MURUGESAN

Week	Topics to be covered
Week -1	Meaning and scope of Accounting, Basic accounting concepts and conventions – Objectives of Accounting
Week -2	Accounting transaction – Double Entry book keeping
Week -3	Journals, Ledger, Preparation of Trial Balance
Week -4	Preparation of Cash Book- Problems
Week -5	Classification of Error – Rectification of Error
Week -6	Preparation of Suspense Accounts - Bank Reconciliation Statement
Week -7	Preparation of Final accounts of Sole Trading concern –Adjustments
Week -8	Closing stock, Outstanding and Prepaid items, income received in advanced and accrued income
Week -9	Interest on loan and interest on investment, Depreciation, Bad debts, provision on debtors, provision on discount on debtors, provision on discount on creditors
Week -10	Admission of a partner- problems.
Week -11	Retirement of a partner – Death of a partner.
Week -12	Dissolution of a partnership – Insolvency of a partner (Application of Indian partnership Act 1932)
Week -13	Insolvency of all partners
Week -14	Garner VS Murray – Gradual realization of asset
Week -15	Piecemeal distribution Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (EVEN SEMESTER- 2022-23)

Class: BBA III year (Semester VI)
Subject Code: 20UFBBC1
Name of the Subject: FUNDAMENTALS OF EVENT MANAGEMENT
Subject In charge: Dr.P.MURUGESAN

Week	Topics to be covered
Week -1	Introduction to Events- Definition- categories of events.
Week -2	Characteristics, Scope of Event Management.
Week -3	Need for event management- Event management in India.
Week -4	Implication of events – Conceptual frame work for event Management.
Week -5	Scope and Skills required for event Management- Role of Event Manager.
Week -6	Ingredients of event Management- 5C's of EM.
Week -7	Event designing-Elements of event Designing.
Week -8	Various designations required for event management.
Week -9	Communication as a tool of Event Management.
Week -10	Career in Event Management.
Week -11	Triangles of Event management-
Week -12	budgeting – Comparison of budget and actual-
Week -13	Event publicity Management.
Week -14	Barriers of event management.
Week -15	Revision and model.

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (EVEN SEMESTER-2022-23)

Class: BBA III year (Semester VI)
Subject Code: 20UFBBC2
Name of the Subject: MARKETING OF SERVICES
Subject In charge: MRS.H.SHARMILA

Week	Topics to be covered
Week -1	Introduction – Goods and services – Features of services marketing – Growth and current status
Week -2	Types of services – Service marketing environment
Week -3	Indian and global context- Discussions and examples
Week -4	Service design – Features – Process of service design
Week -5	Types of service layout – Service benchmarking.
Week -6	Service marketing mix – Characteristics – Process of service mix
Week -7	Service product concept – Pricing in service – Service promotion.
Week -8	Location of service – Classification – Factors governing location
Week -9	Channels of distribution – importance
Week -10	Service intermediaries – importance
Week -11	Kinds of Intermediaries –
Week -12	Service quality
Week -13	Marketing of services with special reference to Banking services
Week -14	Insurance services – Health services
Week -15	Insurance related to Tourism -Revision and model

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (EVEN SEMESTER- 2022-23)

Class: BBA III year (Semester VI)
Subject Code: 20UFBBC3
Name of the Subject: LOGISTICS MANAGEMENT
Subject In charge: Mrs.S.MONISHA

Week	Topics to be covered
Week -1	Introduction - Meaning –Definition-Modern logistics – Importance of Logistics- Functions of Logistics.
Week -2	Operational objectives of logistics- Importance of Logistics Management.
Week -3	Components of Logistics- Integration of Logistics-Logistics Management as a distribution Management
Week -4	Meaning and objectives of SCM-distinction between Logistics and SCM- Inbound and outbound concepts
Week -5	International Insurance – Cargo movements.
Week -6	water damage – Theft – Privacy – pilferage – Other risk
Week -7	perils with air shipments – Risk Retention– Risk Transfer .
Week -8	Marine Cargo Insurance - Elements of air freight Policy.
Week -9	Elements of air freight Policy – Commercial Credit Insurance.
Week -10	Size of Vessels, Tonnage,- Types of vessels.
Week -11	Container, Combination ships – Non vessel operating carriers.
Week -12	International Air transportation – Types of aircrafts – Air cargo Regulations .
Week -13	Truck and Rail Transportation – Inter model – pipe lines.
Week -14	Packaging objectives- Non Traffic barriers- customs cleaning process.
Week -15	Revision and model

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (EVEN SEMESTER- 2022-23)

Class: BBA III year (Semester VI)
Subject Code: 20UFBBE1
Name of the Subject: INSURANCE PRINCIPLES AND PRACTICE
Subject In charge: Dr.P.MURUGESAN

Week	Topics to be covered
Week -1	Defining Risk and Uncertainty - Classification of risk
Week -2	Sources of risk - External and Internal Insurance
Week -3	Meaning, nature and significance essential requirements
Week -4	Principles of risk insurance- Role of IRDA
Week -5	Life Insurance - Law relating to life Insurance; General Principles of Life Insurance
Week -6	Contract; Proposal and policy; assignment and nomination; title and claims
Week -7	Concept of trust in life policy; LIC - Role and functions.
Week -8	General Insurance - Law relating to general insurance; different types of general insurance
Week -9	General insurance Vs life insurance; nature of fire insurance ; various types of fire policy ; subrogation; double insurance
Week -10	Term assurance – health insurance- pension scheme.
Week -11	Deposit and Credit Insurance - Nature, terms and Conditions,
Week -12	Claim, recovery etc., public liability insurance
Week -13	Marine Insurance –case studies
Week -14	Law relating to marine insurance ; scope and nature
Week -15	Types of policy- case study on insurance claims- Revision and model

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (EVEN SEMESTER- 2022-23)

Class: BBA II year (Semester IV)
Subject Code: 21UDBBC1
Name of the Subject: COMPUTERS APPLICATIONS IN BUSINESS
Subject In charge: MRS.H.SHARMILA

Week	Topics to be covered
Week -1	Introduction of Computer – Computer Characteristics – Evolution of Computer
Week -2	Generation of Computer – Types of Computers
Week -3	Input Devices – Output Devices
Week -4	Personal Computers – PC and its main Components – Hardware configuration – Computer memory – Concept – Internal and External – memory – Internal memory
Week -5	Types – RAM, SRAM, DRAM, ROM, PROM, EEPROM – External memory – Floppy Disk, Hard Disk, CD, DVD, ZIP DRIVE – Factors influencing on PC performance
Week -6	Software – System and Application
Week -7	Operating System – Functions and Types
Week -8	Computer Languages – Lower level Languages and Higher Level Languages
Week -9	Compiler and Interpreter – Characteristics of good Language
Week -10	Introduction to Windows – Basic commands in Windows.
Week -11	Word processing – Introduction to MS Office –
Week -12	Components of Word processing
Week -13	Working with MS Word – Word basic commands –
Week -14	Formatting Text and Documents
Week -15	Sorting and Tables – Introduction to Mail-merge- Practice session. Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (EVEN SEMESTER- 2022-23)

Class: BBA II year (Semester IV)
Subject Code: 21UDBBC2
Name of the Subject: BUSINESS TAXATION
Subject In charge: Dr.P.MURUGESAN

Week	Topics to be covered
Week -1	Objectives of Taxation – Canons of Taxation – Tax System in India
Week -2	Direct and Indirect Taxes – Meaning and Types.
Week -3	Meaning of Permanent Account Number, Return of Income, TDS,
Week -4	Advance Tax, Rates of Taxation, Assessment Procedure.
Week -5	Excise Duty – Customs Duty
Week -6	Advalorem and Specific Duties – Entry Tax
Week -7	Service Tax- Examples and case studies
Week -8	GST - Definitions – Importance
Week -9	Levy and collection of tax-
Week -10	GST Registration
Week -11	An overview of Tax Audit
Week -12	Tax Incentives – Acts and exemptions
Week -13	Export Promotions- concepts.
Week -14	Deductions and exemptions
Week -15	Illustrations and case discussions-Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (EVEN SEMESTER- 2022-23)

Class: BBA II year (Semester IV)
Subject Code: 21UDBBC3
Name of the Subject: LEGAL ASPECTS OF BUSINESS
Subject In charge: MRS.S.MONISHA

Week	Topics to be covered
Week -1	Law of Contract: Types of contracts - Essentials of Contract - Agreements
Week -2	Offer - Legal rules -Acceptance - Consideration - Consent - Coercion - undue influence – misrepresentation
Week -3	Legality of Object - Unlawful and illegal agreements - Effects of illegality – Wagering Agreements
Week -4	Agreement opposed to public policy - Agreements in Restraint of trade- Exceptions
Week -5	Void agreements - Restitution - Quasi-contracts.
Week -6	Discharge of contract - Breach of contract
Week -7	Remedies for breach of Contract.
Week -8	Law Of Sale Of Goods: Formation of contract of sale - Sale and agreement to sell
Week -9	Hire purchase agreement -Sale and bailment
Week -10	Capacity to buy and sell - Subject matter of contract of sale
Week -11	Documents of title to goods -
Week -12	conditions and warranties
Week -13	Creation of agency
Week -14	Classification of agents
Week -15	Relations of principal and agent – Duties and rights of agent and principal - Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (EVEN SEMESTER- 2022-23)

Class: BBA II year (Semester IV)
Subject Code: 21UDBBC4
Name of the Subject: ADVERTISING AND SALES PROMOTION
Subject In charge: MRS.H.SHARMILA

Week	Topics to be covered
Week -1	Promotion- Need for communication
Week -2	Promotional mix-pull and push promotions-purpose
Week -3	Objectives – kinds – approaches
Week -4	Advertising: Meaning-importance-Benefits and functions of advertising
Week -5	Advertising VS salesmanship-. Ethical objections
Week -6	Advertising -basic steps in advertising campaign planning
Week -7	Advertising copy - Features of - advertising copy
Week -8	Advertising layout- functions-development of layout
Week -9	Media of Advertisement- Definition- Forms of Media of Advertisement
Week -10	Features and limitations –
Week -11	Advertising budgets
Week -12	Methods of Media of Advertisement
Week -13	Sales promotion – Promotion at different levels
Week -14	Sales promotion - Dealer's – consumer
Week -15	Salesmen level - Illustrations and case studies -Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (EVEN SEMESTER- 2022-23)

Class: BBA I year (Semester II)
Subject Code:22UBBBC1
Name of the Subject: BUSINESS COMMUNICATION
Subject In charge: MRS.S.MONISHA

Week	Topics to be covered
Week -1	Introduction- Communication- Meaning- Definition- Objectives
Week -2	Functions- Principles of communication- Importance of business communication- Importance of feedback
Week -3	Types of communication- Verbal- Non-verbal- Formal- Informal
Week -4	Channels of communication- Merits- Demerits- Barriers to communication- Steps to overcome barriers
Week -5	Fundamentals of business writing- Layout of a business letter
Week -6	Types of business letters- Job applications- reference letters
Week -7	Enquiry and reply letters- Complaints and claims
Week -8	Sales letters- Collection letters.
Week -9	Report writing- Types of report
Week -10	Characteristics of good report- Agenda- Specimen agenda- Minutes- types of minutes
Week -11	Speeches and Presentation- Characteristics of a good speech
Week -12	Specimen speech- Activities and management games
Week -13	Making preparation for speech-
Week -14	Finding out about the environment- preparing the text
Week -15	Visual aids- Appearance and personality-Revision and Model Exam

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
VYASARPADI, CHENNAI – 600 039.
DEPARTMENT OF BUSINESS ADMINISTRATION
TEACHING PLAN (EVEN SEMESTER- 2022-23)

Class: BBA I year (Semester II)
Subject Code: 22UBBBC2
Name of the Subject: BUSINESS ENVIRONMENT
Subject In charge: MRS.H.SHARMILA

Week	Topics to be covered
Week -1	Importance of a business – in terms of its size (tiny, small, medium, large, international) and its range of activities (production of goods and services)
Week -2	Business as an intermediary between consumers and producers
Week -3	Importance of agricultural environment- Role of the Government and Nature of state intervention in promoting a conducive environment to do business
Week -4	Granting License under the LPG 1991,
Week -5	Public-Private Partnerships(PPP);reason for government intervention.
Week -6	The macro-level and micro level conditions: Age group skill levels
Week -7	Economically weaker sections, and the possible ways to assist them – (Examples)
Week -8	The natural, economic, legal, political, cultural
Week -9	Social environment relevant to a business
Week -10	Role of Climate (weather conditions) -, transport, communication in business
Week -11	Role of banking in economic environment,Etc.
Week -12	International business environment:
Week -13	Understanding the impact of world level organizations like the WTO
Week -14	WTO- role in promoting free trade.
Week -15	Foreign direct investment -Revision and Model Exam

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39
PG AND RESEARCH DEPARTMENT OF COMMERCE
TEACHING PLAN (ODD SEMESTER)
CLASS: I B.COM (Shift -I/Shift -II) Semester: I**

Subject Code: 22UACOC1

Name of the Subject: FINANCIAL ACCOUNTING -I

Subject Incharge: DR. N. BHARATHIDASAN & MRS. S.VANAJA

WEEK	TOPICS TO BE COVERED
WEEK 1	Fundamentals of book keeping – Accounting concepts and conventions –
WEEK 2	Journal – Ledger – Trial balance – Final accounts of a sole trader with adjustments
WEEK 3	Errors and Rectification
WEEK 4	Accounting for depreciation – Need for and significance of depreciation, methods of providing depreciation
WEEK 5	Reserves and provisions- Straight Line method
WEEK 6	Diminishing Balance method – Annuity method
WEEK 7	Average due date
WEEK 8	Account current
WEEK 9	Bank Reconciliation Statement
WEEK 10	Hire Purchase and Installment Purchase systems
WEEK 11	Default and Repossession
WEEK 12	Installment purchase system
WEEK 13	Single Entry- Meaning, features, limitations
WEEK 14	Differences between Single Entry and Double Entry System
WEEK 15	Statement of Affairs Method – Conversion Method (Only simple problems)

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: I B.COM (Shift -I/Shift -II)

Semester: I

Subject Code: 22UACOC2

Name of the Subject: PRINCIPLES OF MANAGEMENT

Subject Incharge: MR. B. ANANDAN / MRS. T. SARATHA

WEEK	TOPICS TO BE COVERED
WEEK 1	Management – Meaning and definitions – nature and scope – Levels of Management
WEEK 2	Managerial roles, responsibilities and skills – Evolution of management thoughts and approaches
WEEK 3	Functions of Management - Trends and challenges of Management in Global Scenario – Emerging issues in management.
WEEK 4	Nature, Purpose and functions –Importance and elements of Planning – types of plan.
WEEK 5	Management by Objectives (MBO) – Steps in planning – Planning tools and techniques – Planning premises.
WEEK 6	Strategic Planning – concept and process – Decision Making : Meaning – Steps in Decision Making – Techniques of Decision Making
WEEK 7	Nature and purpose – Formal and Informal Organisation
WEEK 8	Organisation Chart – organization Structure - Types – Line and staff authority – departmentalization.
WEEK 9	delegation of authority – Centralisation and decentralization – span of management
WEEK 10	Staffing: concept of staffing – staffing process Directing: Motivation – Major motivation theories – motivational techniques
WEEK 11	job satisfaction – job enrichment – Leadership –types and theories of leadership
WEEK 12	Communication – process of communication – barrier in communication – effective communication.
WEEK 13	Definition of control, characteristics of control, importance of control – stages in the control process
WEEK 14	requisites of effective control and controlling techniques - use of computers and IT in Management control – Productivity problems and management – control and performance
WEEK 15	direct and preventive control – reporting – co-ordination – functions – Advantages and disadvantages.

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: I B.COM (Shift -I/Shift -II)

Semester: II

Subject Code: 22UBCOC1

Name of the Subject: FINANCIAL ACCOUNTING-II

Subject Incharge: DR. T.K.KARBAGAM / MRS. T. SARATHA

WEEK	TOPICS TO BE COVERED
WEEK 1	Branch Account
WEEK 2	Dependent Branches
WEEK 3	Stock and Debtors system
WEEK 4	Departmental Accounts- Basis for allocation of expenses
WEEK 5	Inter departmental transfer at cost or selling price
WEEK 6	Treatment of Expenses which cannot be allocated.
WEEK 7	Fire Insurance Claims
WEEK 8	Average Clause(Loss of Stock only)
WEEK 9	Royalty Account.
WEEK 10	Introduction – Admission of a partner – Calculation of new ratio and sacrificing ratio – Revaluation of assets and liabilities
WEEK 11	Treatment of goodwill – Capital adjustment – Retirement of partner – Calculation of New ratio and gaining ratio
WEEK 12	Revaluation of assets and liabilities – Treatment of goodwill – Adjustment of goodwill through capital A/c only – Settlements of accounts.
WEEK 13	Dissolution – Insolvency of partners – Garner Vs Murray
WEEK 14	Insolvency of all partners – Deficiency accounts
WEEK 15	Piecemeal distribution – proportionate capital method only.

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: I B.COM (Shift -I/Shift -II)

Semester: II

Subject Code: 22UBCOC2

Name of the Subject: BUSINESS COMMUNICATION

Subject Incharge: Mr. B. ANANDAN & Mr. A.DHANACHEZHIAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Business Communication: Meaning – Objectives – Media – Barriers - Importance of Effective Business Communication
WEEK 2	Modern Communication Methods - Business Letters:
WEEK 3	Need - Functions - Kinds - Essentials of Effective Business Letters - Layout.
WEEK 4	Enquiries - Replies - offers and quotations - Orders and their Execution
WEEK 5	Credit and Status Enquiries - Meaning - Trade and bank references - Complaints and Adjustments - Collection Letters
WEEK 6	How to write effective Collection letters - Sales Letters - Circular Letters.
WEEK 7	Banking Correspondence - Introduction - correspondence with customer, Head
WEEK 8	office – Insurance Correspondence
WEEK 9	Agency Correspondence.
WEEK 10	Company Secretarial Correspondence - Agenda,
WEEK 11	Minutes and Report Writing- Types
WEEK 12	Characteristics of good Report- Report of individuals.
WEEK 13	Application for Jobs: Preparation of resume- Interviews- Meaning- types of Interview
WEEK 14	Business Report Presentations. Strategic Importance of E-Communication. Email, Text Messaging, Slide or Visual Presentation
WEEK 15	Internet - Video conferencing - Group Discussion – Social Networking.

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: II B.Com(Shift -I / Shift -II)

Semester: III

Subject Code: 19UCCOC1

Name of the Subject: CORPORATE ACCOUNTING -1

Subject Incharge: MR. B. ANANDAN & MRS. T. SARATHA

WEEK	TOPICS TO BE COVERED
WEEK 1	Redemption of preference shares
WEEK 2	Procedures for redemption of preference shares
WEEK 3	Redemption of Debentures
WEEK 4	Profits prior to incorporation
WEEK 5	Underwriting of shares and debentures.
WEEK 6	Underwriting of shares and debentures.
WEEK 7	Final Accounts of Banking Companies
WEEK 8	Final Accounts of Banking Companies
WEEK 9	CRR – SLR – Significance.
WEEK 10	Company final accounts
WEEK 11	Preparation of Profit and loss account
WEEK 12	Company Balance sheet.
WEEK 13	Double accounting system – features – advantages
WEEK 14	Disadvantages - Reserves and tariff – Receipts and capital accounts
WEEK 15	General balance sheet of electricity companies

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: II B.Com(Shift -I / Shift -II)

Semester: III

Subject Code: 19UCCOC2

Name of the Subject: LEGAL ASPECTS OF BUSINESS

Subject Incharge : Dr. V. RAVICHANDRAN & Dr. M.SRINIVASAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Indian Contract Act-Formation -Forms of contract-Classification of contracts
WEEK 2	Offer and Acceptance
WEEK 3	Considerations.
WEEK 4	Capacity of a person
WEEK 5	Competent parties to a contract-Flaw in consent
WEEK 6	Void agreements-Illegal agreements.
WEEK 7	Performance of contract
WEEK 8	Quasi contract- Discharge of Contract
WEEK 9	Remedies for breach of contract.
WEEK 10	Contract of Agency-Types
WEEK 11	Creation, duties, rights of principal
WEEK 12	Agent-Termination of agency
WEEK 13	Sale of goods Act-Sale and agreement to sell
WEEK 14	Caveat emptor- Implied conditions and warranty
WEEK 15	Rights of unpaid seller.

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: II B.Com(Shift -I / Shift -II)

Semester: III

Subject Code: 19UCCOC3

Name of the Subject: BANKING LAW AND PRACTICE

Subject Incharge : Dr. N. BHARATHIDASAN & Mr. A. DHANACHEZHAYAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Meaning and Definition of banking – functions of Commercial bank
WEEK 2	Reserve Bank of India – Functions of RBI – Credit control
WEEK 3	Types of credit control – Qualitative credit control and Quantitative credit control-Different types of Accounts and Deposits.
WEEK 4	Negotiable Instrument Act, 1881- Meaning and Definition of Cheques – essential characteristics of Cheques
WEEK 5	Drafting of Cheque – crossing – material. alteration
WEEK 6	Endorsement – Differences between a cheque, bill of exchange and promissory note
WEEK 7	Relationship between Banker and Customer – Special types of customers
WEEK 8	Rights, Responsibility and Duties of Paying and collecting banker
WEEK 9	Precautions to be taken in Paying and Collecting of cheques – Statutory protection to them
WEEK 10	Loans and Advances – Principles of sound lending
WEEK 11	Forms of Loans and Advances – classifications of loans and advances
WEEK 12	Precautions to be taken by a banker in lending Loans and Advances – Types of securities.
WEEK 13	Recent trend in Banking- e banking-ECS, RTGS, NEFT, DEMAT
WEEK 14	Internet banking- green banking- ATM – ECS - e-banking - credit
WEEK 15	Card – debit card –difference between credit card and debit card-

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: II B.Com(Shift -I / Shift -II)

Semester: III

Subject Code: 19UCCOC4

Name of the Subject: CONSUMER BEHAVIOUR

Subject Incharge: DR. S.SARAVANAN / MRS. VANAJA

WEEK	TOPICS TO BE COVERED
WEEK 1	Concepts And Significance of Consumer Behavior
WEEK 2	Dimensions of Consumer Behavior
WEEK 3	Application of knowledge of Consumer Behaviour in marketing decisions
WEEK 4	Industrial and individual consumer behaviour models
WEEK 5	Howard- Sheth, Engel – Kollat, Webster and Lind Consumer Behaviour Models
WEEK 6	Implications of the models on marketing decisions
WEEK 7	Psychological Influences on consumer behavior – motivation – perception
WEEK 8	personality Learning and Attitude- Self Image and Life styles
WEEK 9	Consumer expectation and satisfaction
WEEK 10	External Influences of Socio-Cultural, Cross Culture
WEEK 11	External Influences of Family group – Reference group – Communication
WEEK 12	Influences on Consumer behaviour
WEEK 13	Purchase Decision Process - High and low involvement
WEEK 14	Pre-purchase and post-purchase behavior – Online purchase decision process
WEEK 15	Diffusion of Innovation – Managing Dissonance - Emerging Issues.

Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: II B.Com(Shift -I / Shift -II)

Semester: IV

Subject Code: 19UDCOC1

Name of the Subject: Corporate Accounting II

Subject Incharge: MR. B. ANANDAN & MRS. T. SARATHA

WEEK	TOPICS TO BE COVERED
WEEK 1	Accounts of Insurance companies –Types of Insurance – Life Insurance
WEEK 2	Consideration for annuities granted – Balance sheet – Determination of Profit and Loss accounts of General Insurance
WEEK 3	Reserve for unexpired risk – Preparation of final accounts.(Simple problems only)
WEEK 4	Accounts of Holding companies- Minority interest
WEEK 5	Cost of Control/Capital Reserve – Elimination of common
WEEK 6	Preparation of Consolidated Balance sheet (simple problems only)
WEEK 7	Valuation of Goodwill
WEEK 8	Valuation of shares
WEEK 9	Various methods.
WEEK 10	Liquidation- Statements of affairs
WEEK 11	Deficiency accounts
WEEK 12	Liquidator's final Statement of account
WEEK 13	Accounting standard – Indian and International accounting standards
WEEK 14	Accounting standards 1,3,6,10,14,21 and 29
WEEK 15	Application – Scope – Advantages and Disadvantages – Challenges - Inflation accounting (theory only)

Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: II B.Com(Shift -I / Shift -II)

Semester: IV

Subject Code: 19UDCOC2

Name of the Subject: COMPANY LAW

Subject Incharge: DR.T.K.KARBAGAM / DR.M.SRINIVASAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Meaning and Definition of Company- Special Features
WEEK 2	Kinds of Companies-Differences between Private and Public Company
WEEK 3	Lifting of Corporate Veil- The Companies Act, 2013- Objects of the Act.
WEEK 4	Formation of a Company – Role of promoters- Incorporation of the Company
WEEK 5	Memorandum of Association- contents and alterations- Articles of Association- contents and alteration - Doctrine of Ultra Vires
WEEK 6	Indoor management- Prospectus- contents- Statement in lieu of prospectus.
WEEK 7	Share capital – Kinds of Share capital – Debentures
WEEK 8	Borrowing powers- Mortgages and Charges- Fixed and Floating Charges
WEEK 9	Meeting- kinds of meeting - Agenda.
WEEK 10	Company Management- Directors
WEEK 11	Appointment – Removal- Disqualification
WEEK 12	Rights and Duties of Directors – Directors Remuneration.
WEEK 13	Winding up of a Company –Types
WEEK 14	Winding up of the Company by the Court – Voluntary Winding up
WEEK 15	Winding up subject to the Supervision of the Court.

Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: II B.Com(Shift -I / Shift -II)

Semester: IV

Subject Code: 19UDCOC3

Name of the Subject: MARKETING MANAGEMENT

Subject Incharge: DR.K.BASKARAN / Mr. A. DHANACHEZHAYAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Marketing – Definition – Objectives – Functions of Marketing
WEEK 2	marketing environment- internal (Micro) and external Macro) marketing
WEEK 3	Modern marketing concept – Marketing in economics development.
WEEK 4	Market – Definition and meaning – Classification – factors
WEEK 5	Advantages and disadvantages - Market segmentation – meaning – significance
WEEK 6	scope- factors of segmentation- Market targeting and positioning.
WEEK 7	Marketing Mix –4P’s -Product Planning – Development
WEEK 8	Product line – Product Mix strategies – Product life cycle – Diversification
WEEK 9	Pricing methods and Strategies.
WEEK 10	Channels of Distribution – Meaning - Factors influencing Channels of Distribution
WEEK 11	Channel members – Promotion – Objectives of Promotion
WEEK 12	Basics of Advertising – Sales promotion and Personal Selling.
WEEK 13	Recent Trends in Marketing – Green Marketing
WEEK 14	Basic understanding of E-Marketing – Consumerism
WEEK 15	Market Research – elements- MIS and marketing Regulations.

Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: II B.Com(Shift -I / Shift -II)

Semester: IV

Subject Code: 19UDCOC4

Name of the Subject: BUSINESS ENVIRONMENT

Subject Incharge:DR.S.SARAVANAN / MRS. S.VANAJA

WEEK	TOPICS TO BE COVERED
WEEK 1	The concept of Business Environment – Its nature and significance
WEEK 2	Brief overview of Political – Cultural – Legal – Economic and Social Environment
WEEK 3	impact on business and strategic decisions; Environment scanning- SWOT-ETOP
WEEK 4	Political Environment
WEEK 5	Government and Business relationship in India
WEEK 6	Provisions of Indian constitutions pertaining to business
WEEK 7	Social environment – Cultural heritage – Social attitudes
WEEK 8	impact of foreign culture – castes and communities – joint family systems – linguistic and religious groups
WEEK 9	types of social organization – social responsibilities of business
WEEK 10	Economic environment – economic systems and theory impact of business
WEEK 11	Macroeconomic parameters like GDP – Per capita income and their impact on business decisions
WEEK 12	Inflation – characteristics – degree of inflation- causes- effect and control of inflation
WEEK 13	Financial environment- Indian financial system
WEEK 14	financial institutions – role of financial institutions in industrial development- merger and acquisitions
WEEK 15	Business ethics – Ethical issues and values in business

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: III B.COM (Shift -I/Shift -II)

Semester: V

Subject Code: 19UECOC1

Name of the Subject: COST ACCOUNTING

Subject Incharge: Dr. V. RAVICHANDRAN / Mr. A. DHANACHEZHAYAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Cost accounting – Definition – Meaning and Scope – Concept and Classification – Costing an aid to Management
WEEK 2	Types and Methods of Cost – Elements of Cost Preparation of Cost Sheet and Tenders and Quotations
WEEK 3	Difference between cost accounting and financial accounting.
WEEK 4	Material Control: Levels of material Control – Need for Material Control
WEEK 5	Economic Order Quantity – ABC analysis – Perpetual inventory – Purchase and stores Control: Purchasing of Materials – Requisition for stores
WEEK 6	Stores Control – Methods of valuing material issue – FIFO – LIFO – SAM – WAM.
WEEK 7	Labour: System of wage payment – Time wages – Piece wages
WEEK 8	Incentives plans – Bonus system – Idle time – Control over idle time – Labour turnover
WEEK 9	Overhead – classification of overhead – allocation and absorption of overhead.
WEEK 10	Process costing – Features of process costing
WEEK 11	process losses, wastage, scrap, normal process loss
WEEK 12	Abnormal loss, abnormal gain. (Excluding inter process profits and equivalent production).
WEEK 13	Operating Costing
WEEK 14	Reconciliation of Cost and Financial accounts.
WEEK 15	Reconciliation of Cost and Financial accounts.

Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: III B.Com(Shift -I / Shift -II)

Semester: V

Subject Code: 19UECOC2

Name of the Subject: FINANCIAL MANAGEMENT

Subject Incharge: Dr. N. BHARATHIDASAN & Mrs. T. SARATHA

WEEK	TOPICS TO BE COVERED
WEEK 1	Introduction – Meaning – Importance – Functions - Objectives of Financial Management)
WEEK 2	Factors of financial management – Role of finance Manager – Sources of raising finance
WEEK 3	Long term and short term sources of funds.(only theory)
WEEK 4	Cost of Capital – Cost of different sources of capital – Weighted Average Cost of Capital
WEEK 5	Capital structure- net income approach- net operation approach
WEEK 6	Traditional approach and MM approach(theories only) (Cost of capital theory and problem)
WEEK 7	Working capital – Concepts – Components
WEEK 8	Importance – types -Determination of working capital
WEEK 9	Factors influencing working capital management- working capital cycle. (theory and problem)
WEEK 10	Leverage –definition – meaning –types-Financial leverage, Operating Leverage and Combined Leverage
WEEK 11	Dividend policy – definition – meaning –types
WEEK 12	Nature and objective Determination of Dividend. (theory and problem)
WEEK 13	Capital Budgeting – Importance – Factors influencing capital expenditure decisions – Types of Capital expenditure – Methods
WEEK 14	Pay-back period – Accounting rate of return – Discounted cash flow method
WEEK 15	N.P.V method – Profitability Index Method - Internal rate of return method

Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: III B.Com(Shift -I / Shift -II)

Semester: V

Subject Code: 19UECOC3 Name of the Subject: Human Resource Management

Subject Incharge: Mr. B. ANANDAN & Mrs. S. VANAJA

WEEK	TOPICS TO BE COVERED
WEEK 1	HRM Concept and Functions, Role, Status
WEEK 2	competencies of HR Manager –HR Policies
WEEK 3	Emerging Challenges of Human Resource Management - Workforce diversity.
WEEK 4	Human Resource Planning- Quantitative and Qualitative Dimensions - job analysis – job description and job specification
WEEK 5	Recruitment And Selection – meaning – process of recruitment – sources and techniques of Recruitment – Meaning and Process of Selection
WEEK 6	Selection Tests And Interviews – placement, induction, socialization and Retention
WEEK 7	Concept and Importance -Training and development methods
WEEK 8	Identifying Training and Development Needs - Designing Training Programmes
WEEK 9	Evaluating Training Effectiveness -Training Process Outsourcing - Career Development
WEEK 10	Nature, objectives and importance - Modern Methods and techniques of performance appraisal
WEEK 11	Employee counselling - job changes - transfers and promotions
WEEK 12	Problems in Performance Appraisal – Essentials of Effective Appraisal System
WEEK 13	Compensation - Concept and policies- wage and Salary administration - Fringe benefits
WEEK 14	Performance linked compensation - Employee health, welfare and safety social security
WEEK 15	Employer-Employee relations- grievance handling and redressal.

Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: III B.Com (Shift -I / Shift -II)

Semester: V

Subject Code: 19UECOC4

Name of the Subject: INCOME TAX LAW & PRACTICE-I

Subject Incharge: DR.S.SARAVANAN / DR.M.SRINIVASAN

WEEK	TOPICS TO BE COVERED
WEEK 1	History of Income tax in India – objectives of taxation – canons of taxation – characteristics of good tax system
WEEK 2	definition of tax –classification of taxes – distinction between direct and indirect tax - Income Tax Act – Current Finance
WEEK 3	Agricultural income – Assessee – Assessment Year – Income – Person – Previous Year – Exempted incomes.
WEEK 4	Residential Status and Incidence of Tax – Classification of residential status of Taxable entities
WEEK 5	Residential status of an Individual – Resident – Basic conditions - Additional conditions – Non-resident
WEEK 6	Residential status of a firm, AOP – Residential status of companies – incidence of tax and residential status.
WEEK 7	Heads of Income – Income under the head Salaries – Features – Allowances
WEEK 8	Fringe Benefits – Perquisites – Profits in lieu of salary – Provident Fund – Deductions
WEEK 9	Computation of salary income.
WEEK 10	Income from House property
WEEK 11	Annual value – Determination – Deductions
WEEK 12	Computation of Income from House Property
WEEK 13	Profits and Gains of Business or Profession – Definition – Chargeability – Admissible deduction
WEEK 14	Inadmissible expense – Computation of Business Income(excluding firms and companies
WEEK 15	Computation of Professional Income

Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: III B.Com(Shift -I / Shift -II)

Semester: V

Subject Code: 19UECOE1

Name of the Subject: FINANCIAL SERVICES

Subject Incharge: DR.S.SARAVANAN / MRS. T.SARADHA

WEEK	TOPICS TO BE COVERED
WEEK 1	Meaning - Importance of financial services – Types of financial services
WEEK 2	Financial services and economic environment
WEEK 3	Players in financial services sector.
WEEK 4	Merchant Banking – Functions
WEEK 5	Issue Management – Underwriting – Capital Market
WEEK 6	Stock Exchange –Functions- Role of SEBI
WEEK 7	Leasing finance
WEEK 8	Hire purchase – Concepts and features
WEEK 9	Types of Lease
WEEK 10	Factoring –advantages
WEEK 11	Functions of factor – types
WEEK 12	Consumer finance
WEEK 13	Venture capital
WEEK 14	Mutual funds – Types- Importance
WEEK 15	Credit Rating Agencies in India.

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: III B.Com(Shift -I / Shift -II)

Semester: VI

Subject Code: 19UFCOC1

Name of the Subject: MANAGEMENT ACCOUNTING

Subject Incharge: Dr. V. RAVICHANDRAN & Mr. A. DHANACHEZHAYAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Management accounting –Definition – Objectives
WEEK 2	nature – scope – importance and limitations.
WEEK 3	management accounting Vs. Cost accounting – Management accounting Vs. Financial Accounting.
WEEK 4	Funds flow statement – Working capital
WEEK 5	Preparation of funds flow statement – Cash flow analysis
WEEK 6	preparation of cash flow statement.
WEEK 7	Ratio analysis – Importance – limitations
WEEK 8	Classification of ratios – Financial ratios
WEEK 9	profitability – turnover
WEEK 10	Budgetary control – Meaning – Objectives
WEEK 11	Merits and demerits-various kinds of budgets
WEEK 12	Zero Base Budget.
WEEK 13	Marginal costing –Meaning- significance
WEEK 14	Absorption costing and marginal costing – CVP analysis.
WEEK 15	Decision making problems – key factor - Make or buy decision.

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: III B.Com(Shift -I / Shift -II)

Semester: VI

Subject Code: 19UFCOC2

Name of the Subject: PRACTICAL AUDITING

Subject Incharge: DR. K.BASKARAN / Mrs. S. VANAJA

WEEK	TOPICS TO BE COVERED
WEEK 1	Auditing- Meaning-Definition- Objects Programme.
WEEK 2	Types of Audit- Cost, Management, Financial and Social Audit
WEEK 3	Advantages and Disadvantages- Audit Programme.
WEEK 4	Internal check-Meaning and Definition - Scope- Objectives - Importance
WEEK 5	Differences between Internal Check, Internal Control and Internal
WEEK 6	Vouching – Cash Transactions – Credit Sales- Credit Purchases
WEEK 7	Verification and Valuation of Assets (Fixed, Current and Intangible assets)
WEEK 8	Liabilities (Current and Contingent liabilities)
WEEK 9	Verification of Inventories and Investments.
WEEK 10	Appointment of Auditors- First Auditor - Qualification
WEEK 11	Remuneration-Powers- Duties and Liabilities- Re-appointment of Auditor
WEEK 12	Removal of Auditors under the Companies Act, 1956.
WEEK 13	Specialized Audit – Audit programme for Educational Institutions(School, Colleges and Universities
WEEK 14	Hotels, Banking, Insurance Companies
WEEK 15	Charitable institutions

Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: III B.Com(Shift -I / Shift – II)

Semester: VI

Subject Code: 19UFCOC3

Name of the Subject: INCOME TAX LAW & PRACTICE-II

Subject Incharge: DR.S.SARAVANAN / DR.M.SRINIVASAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Capital Gains – Definition.
WEEK 2	Kind of Capital assets – Exempted Capital
WEEK 3	Computation of Capital Gains.
WEEK 4	Income from Other Sources
WEEK 5	Income chargeable to tax – Deductions – Bond washing transactions
WEEK 6	Computation of income from other sources.
WEEK 7	Set off and Carry forward of Losses
WEEK 8	Deductions from Gross Total Income.
WEEK 9	Deductions from Gross Total Income.
WEEK 10	Assessment of Individuals
WEEK 11	Computation of total income and tax liability
WEEK 12	Assessment of firms.
WEEK 13	Administration of the income tax Act – income tax authorities – CBDT – powers
WEEK 14	Assessing officer - Procedure for assessment – Types of assessment – Advance Payment of Tax
WEEK 15	Deduction of tax at source – Filing of return – Types of filing – PAN.

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: III B.Com(Shift -I / Shift -II)

Semester: VI

Subject Code: 19UFCOE2

Name of the Subject: BUSINESS TAXATION

Subject In charge: Dr.T.K.KARBAGAM & Mrs. T. SARATHA

WEEK	TOPICS TO BE COVERED
WEEK 1	Indirect taxes – Meaning and Nature - Special features of Indirect Taxes
WEEK 2	Contribution to government revenues - Taxation under the Constitution
WEEK 3	Advantages and Disadvantages of Indirect Taxes.
WEEK 4	Good and Service Tax Introduction – Meaning - Need for GST - Advantages of GST - Structure of GST in India.
WEEK 5	Dual concepts - SGST-CGST-IGST-UTGST- Types of Rates under GST – Taxes subsumed under State Goods and Services Tax Act 2017- Taxes subsumed under Central Goods and Services Tax Act 2017
WEEK 6	Meaning of important terms: Goods, services, supplier, business, manufacture, casual taxable person, aggregate turnover, input tax and output tax.
WEEK 7	Levy and Collection under SGST/CGST Acts - Concept of supply - Composite and Mixed supplies - Composition Levy
WEEK 8	Time of supply of goods and services - Value of Taxable supply. Input Tax credit - Eligibility and conditions for taking input credit- Reverse charge under the GST
WEEK 9	Registration procedure under GST- Concept of e-way Bill - Filing of Returns.
WEEK 10	Levy and Collection under The Integrated Goods and Services Tax Act 2017
WEEK 11	Meaning of important terms: Integrated tax, intermediary, location of the recipient and supplier of services,
WEEK 12	output tax. Levy and Collection of Tax.
WEEK 13	Introduction to Customs Laws in India – The Customs Act 1962 - The Customs Tariff Act 1975
WEEK 14	Levy and Exemption from Custom duty - Taxable event - Charge of Custom duty- Exemptions from duty
WEEK 15	Customs procedures for import and export - Meaning of Classification of goods.

Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: III B.Com(Shift -I / Shift -II)

Semester: VI

Subject Code: 19UFCOE3

Name of the Subject: ENTREPRENEURIAL DEVELOPMENT

Subject Incharge: DR.N.BARATHIDASAN / MRS.T.SARADHA

WEEK	TOPICS TO BE COVERED
WEEK 1	Entrepreneur – Concepts – Characteristics – Functions
WEEK 2	Types –Growth of Entrepreneurship in India
WEEK 3	Roles of Entrepreneurship in Economic Development
WEEK 4	Project – Meaning of Project – Project Identification – Project selection
WEEK 5	Project Report – Significance - Contents
WEEK 6	Formulation – Specimen of a Project report
WEEK 7	Enterprises – Definition – Opportunities for entrepreneurial Career
WEEK 8	Role of Small Enterprises in Economic Development – Problems of Small-Scale Industries
WEEK 9	Government Policy and Support to Small Scale Enterprises.
WEEK 10	Women Entrepreneur – Functions – Problems
WEEK 11	Rural Entrepreneurship – Need- Problems
WEEK 12	Entrepreneurship Development Programmes (EDPs)
WEEK 13	Institutional support to Entrepreneurs
WEEK 14	Commercial Banks – Other Financial Institutions
WEEK 15	IDBI, IFCI, SIDO, SISI, DICs, - Industrial estate

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: I M.Com

Semester: I

Subject Code: 22PACOC1

Name of the Subject: ADVANCED CORPORATE ACCOUNTING & ACCOUNTING STANDARD

Subject Incharge: MR.B.ANANDAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Holding Company Accounts- Holding and Subsidiary companies
WEEK 2	Treatment of dividend-(Inter-company holding excluded)
WEEK 3	Preparation of Consolidated Balance Sheet
WEEK 4	Banking companies - Preparation of P & L A/c- Balance sheet
WEEK 5	Rebate on Bills Discounted- Schedules for Profit & Loss Account
WEEK 6	Schedules for Balance sheet- Bank advances.
WEEK 7	Insurance companies (As per New provisions)
WEEK 8	Regulation of insurance Business in India- IRDA- Regulations 2002
WEEK 9	Fire Insurance- Life Insurance- Marine Insurance with schedules
WEEK 10	Accounting Standards
WEEK 11	Indian and International Accounting Standards - 1, 3, 6, 10, 14, 21 and 29 –
WEEK 12	Advantages - Disadvantages.
WEEK 13	Double Accounting system- Introduction- Features
WEEK 14	Advantages and disadvantages-Accounts of Electricity companies and Railways
WEEK 15	Replacement and Renewals.

Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: I M.Com

Semester: I

Subject Code: 22PACOC2

Name of the Subject: ADVANCED FINANCIAL MANAGEMENT

Subject Incharge: DR. N.BARATHIDASAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Introduction of Finance – Meaning- functions-importance
WEEK 2	Scope- Financial management- Objectives – Role of the Finance manager
WEEK 3	Sources finance- Short term and Long term
WEEK 4	Cost of Capital- Meaning- Importance
WEEK 5	Cost of debt-Preference shares-Cost of equity- Cost of retained earnings
WEEK 6	Weighted average cost of capital
WEEK 7	Capital Structure- Meaning - Definition- Features
WEEK 8	Capital structure decision- EBIT-EPS analysis – Capital structure theories – factors determining capital structure
WEEK 9	Leverages- Operating – Financial- Combined leverages
WEEK 10	Capital Budgeting – Meaning- Significance
WEEK 11	Techniques of capital budgeting- Payback period- ARR – IRR
WEEK 12	Net present value- Profitability index
WEEK 13	Working Capital Management- Meaning- Current assets and current liabilities
WEEK 14	Operating cycle- classification of working capital- factors determining working capital
WEEK 15	management of working capital- Estimation of working capital.

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: I M.Com

Semester: I

Subject Code: 22PACOC3

Name of the Subject: CORPORATE LAWS

Subject Incharge:DR.S.SARAVANAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Corporate laws- importance- of various laws- InformationTechnologyAct-2002-Definition-Authentication of Electronic records- digital signature
WEEK 2	Electronic Governance-Publication o of Gazette- Regulation Authorities
WEEK 3	Controller of certifying authorities-Function of Controller.
WEEK 4	Intellectual property Rights-Copyright Act 1957-meaning-Copyright authorities
WEEK 5	The Patents Act,1970-Application of Patents-Rights of patentees.
WEEK 6	The Trade and Merchandise Marks Act,1958-uses of Trademarks and Registered users.
WEEK 7	SEBI Act 1992(As amended by the Securities laws Amendment Act,2014)
WEEK 8	Definitions- Powers and functions of the Board-Regulations-Stock brokers.
WEEK 9	Audit Penalties and Adjudication
WEEK 10	The Competition Act,2002- The Competition (Amendment) Act, 2007
WEEK 11	Definition-Competition Commission of India-duties
WEEK 12	powers and function of commission
WEEK 13	The Environment protection Act,1986-Definition-rules and notifications-Precautionary measures- Powers of Central Government
WEEK 14	Consumer Protection Act, 1986(Latest amendments included) -Definition-The central Consumer protection Council
WEEK 15	Consumer dispute Redressal Agencies.

Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: I M.Com

Semester: I

Subject Code: 22PACOE1A

Name of the Subject:ORGANISATIONAL BEHAVIOUR

Subject Incharge: DR.V.RAVICHANDRAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Organisational Behaviour- Meaning-Characteristics-Importance
WEEK 2	Models of Organisational Behaviour- Cognitive Framework
WEEK 3	Behaviouristic Framework and social Cognitive framework
WEEK 4	Perception- Nature-Process-Importance-Behavioural Applications
WEEK 5	Attitudes-Concept-Process and importance-Measurements-Values-characteristics- Types and -Personality
WEEK 6	Learning- Concept and Theories of learning
WEEK 7	Motivation-Meaning- importance-Principles
WEEK 8	Theories-Maslow-Herzberg-Theories
WEEK 9	Vroom-Porter & Lawler-Job Satisfaction.
WEEK 10	Leadership-Concepts –Functions- Style and Theories of leadership-Traits-Behavioural and situational theories
WEEK 11	Interpersonal relationship-Group Dynamics-Definition
WEEK 12	Stages of Group development-Formal and Informal Groups
WEEK 13	Organisational change-Concept Nature-Resistance to Change-Managing Resistance to change - Stress
WEEK 14	Understanding stress-Consequences-Causes-Managing stress
WEEK 15	Organisational Climate- Culture-process of organizational culture

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: I M.Com

Semester: II

Subject Code: 22PBCOC1

Name of the Subject: ACCOUNTING FOR MANAGEMENT

Subject Incharge: DR.N.BARATHIDASAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Introduction to Financial, Cost and Management Accounting
WEEK 2	Scope and significance of Management accounting - features - Management accounting Vs Financial Accounting
WEEK 3	Management Accounting Vs Cost Accounting (Theory only)
WEEK 4	Analysis of financial statement- Concepts of Financial Statements
WEEK 5	Nature- Analysis –Types of financial statements
WEEK 6	Comparative financial statements-Common size statements.
WEEK 7	Funds flow statement- Funds- Working capital- Schedule of changes in working capital-Funds -funds from operation
WEEK 8	Sources and Application of funds-Funds Flow statement
WEEK 9	Cash Flow Analysis- Cash from operation-Sources and Uses of funds-Cash Flow statement (As per AS 3).
WEEK 10	Standard Costing - Advantages – Limitations - Standards of Material
WEEK 11	Labour, and Overheads- Variance Analysis
WEEK 12	Computation of variances- Material-Labour--Sales variances.
WEEK 13	Marginal costing- Cost statement-BEP Analysis- Profit volume Ratio- Contribution- Margin of Safety-
WEEK 14	Cost Volume profit Analysis- Decision making Application- Make or Buy
WEEK 15	Plant Merger –Product Mix-Export Decision

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: I M.Com

Semester: II

Subject Code: 22PBCOC2

Name of the Subject: LABOUR LEGISLATION

Subject Incharge: DR.V.RAVICHANDRAN

WEEK	TOPICS TO BE COVERED
WEEK 1	THE FACTORIES ACT, 1948- Meaning-Definitions-objects-Health
WEEK 2	Safety-Welfare measures- Working hours
WEEK 3	Special provisions for Women and young children- Annual leave –Penalties.
WEEK 4	THE INDUSTRIAL DISPUTES ACT,1947-Industrial dispute-Definitions-objectives-.Strike-Lock out-Lay off
WEEK 5	Retrenchment-Closure-Dispute settlement-Provisions
WEEK 6	TRADE UNION ACT,1926-Definition- Objectives-Registration-provisions-functions.
WEEK 7	THE EMPLOYEE’S COMPENSATION ACT,1923- Meaning-Objectives
WEEK 8	Work man’s compensation-Disablement –
WEEK 9	Amount of compensation-provisions-Defenses available to employers.
WEEK 10	THE EMPLOYEES STATE INSURANCE ACT,1948 – Meaning - Objectives-administration of the scheme-officers and inspectors
WEEK 11	ESI fund contributions-benefits-penalties
WEEK 12	ESI corporation powers- functions
WEEK 13	THE PAYMENT OF WAGES ACT, 1936, THE MINIMUM WAGES ACT, 1948-Meaning- objectives
WEEK 14	Scope- responsibility-for payment of wages –fixation of wages-deductions
WEEK 15	Fixation of Minimum wages- overtime rate

Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: I M.Com

Semester: II

Subject Code: 22PBCOC3

Name of the Subject: SERVICES MARKETING

Subject Incharge: DR.S.SARAVANAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Services Marketing – Meaning – Nature – Concept
WEEK 2	Growth - Classification of services
WEEK 3	Characteristics of services and their marketing implications.
WEEK 4	Marketing Mix in services marketing-The seven Ps –Product decisions,
WEEK 5	Pricing strategies and tactics,
WEEK 6	Promotion of services and placing or Distribution Methods for services.
WEEK 7	Services promotion strategy-concepts –objectives-Advertising-Limitations
WEEK 8	Public relations-Publicity-Public services- Strategy of services communication
WEEK 9	Internal and external communication.
WEEK 10	Delivering Quality Services- Causes of service
WEEK 11	Gap analysis-Factors and Techniques to resolved this Gap-gaps in service
WEEK 12	Quality standards
WEEK 13	Services distribution strategy-concepts - Factors governing the choice of Direct sales - Delivery of services through intermediaries
WEEK 14	Outsources services distribution
WEEK 15	Franchising-service distribution through agents and brokers.

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: I M.Com

Semester: II

Subject Code: 22PBCOE2A

Name of the Subject: HUMAN RESOURCE DEVELOPMENT

Subject Incharge:DR.T.K.KARBAGAM

WEEK	TOPICS TO BE COVERED
WEEK 1	Introduction to HRD- Meaning- definition- importance- Objectives- Strategic Human Resource Management
WEEK 2	Human Resource policies- Need- Type and Scope
WEEK 3	Emerging challenges of human resource management- role of HR managers.
WEEK 4	Human resource planning- Process, Forecasting-Factors influencing HR plan
WEEK 5	Assessing Human resource requirements- Job description & specification
WEEK 6	Job design- job characteristics.
WEEK 7	Recruitment and training- Recruitment- sources- Factors determining recruitment- Internal and sources of recruitment
WEEK 8	E-recruitment –selection process- Tests- Interviews- Training Techniques..
WEEK 9	Process - methods of training.
WEEK 10	Performance appraisal and compensation management
WEEK 11	performance appraisal- compensation management-Job evaluation-compensation
WEEK 12	performance appraisal- objectives and methods-MBO.
WEEK 13	Emerging horizons of HRM- e-HRM
WEEK 14	Impact of HRM practice an organization performance- quality circle
WEEK 15	labour and international organization (I & O)

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: II M.Com

Semester: III

Subject Code: 19PCCOC1

Name of the Subject: INCOME TAX LAW AND PRACTICE -I

Subject Incharge:DR.S.SARAVANAN

WEEK	TOPICS TO BE COVERED
WEEK 1	History of Income tax in India – objectives of taxation – canons of taxation – characteristics of good tax system
WEEK 2	definition of tax –classification of taxes – distinction between direct and indirect tax - Income Tax Act – Current Finance Act – Agricultural income
WEEK 3	Assessee – Assessment Year – Income – Person – Previous Year – Exempted incomes.
WEEK 4	Residential Status and Incidence of Tax – Classification of residential status of Taxable entities
WEEK 5	Residential status of an Individual – Resident – Basic conditions - Additional conditions
WEEK 6	Non-resident – Residential status of a firm, AOP – Residential status of companies – incidence of tax and residential status.
WEEK 7	Heads of Income – Income under the head Salaries – Features
WEEK 8	Allowances – Fringe Benefits – Perquisites – Profits in lieu of salary – Provident Fund
WEEK 9	Deductions – Computation of salary income.
WEEK 10	Income from House property – Annual value – Determination – Deductions
WEEK 11	Computation of Income from House Property.
WEEK 12	Computation of Income from House Property.
WEEK 13	Profits and Gains of Business or Profession – Definition – Chargeability – Admissible deduction
WEEK 14	Inadmissible expense – Computation of Business Income(excluding firms and companies)
WEEK 15	Computation of Professional Income

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: II M.Com

Semester: III

Subject Code: 19PCCOC2

Name of the Subject: APPLIED COSTING

Subject Incharge: DR.V.RAVICHANDRAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Costing - Cost Accounting – Meaning and Definition – Financial Accounting Vs Cost accounting – Relationship of cost accounting with management accounting .
WEEK 2	Nature and significance of Cost Accounting – Essentials of good costing system - Elements of cost – Cost concepts and preparation of cost sheet
WEEK 3	Methods of Costing -job order Costing – Process Costing- Materials – Issue of materials – Pricing of material issued.
WEEK 4	Labour – types of labour cost – Methods of time keeping – Idle time - overtime – labour turnover - Preparation of Pay Roll – Wage payment and incentive system
WEEK 5	Overhead – meaning and classification of overheads – Departmentalization of Overheads – Allocation - Apportionment – Re-apportionment- Absorption of Overhead cost
WEEK 6	Difference between cost allocation and apportionment and Reapportionment – treatment of over and under absorbed overheads.
WEEK 7	Process costing – Comparison between joint costing and process costing – costing procedure under process costing- Process Losses
WEEK 8	Inter process profit – Equivalent production – methods of computing equivalent units- Evaluation of equivalent production
WEEK 9	Joint product and by products costing – accounting for joint products & by-products.
WEEK 10	Marginal costing – Salient features – Marginal costing and absorption costing - Break – Even analysis
WEEK 11	Cost – Volume-profit analysis – Application of Marginal costing for Business decision making ---Determination of sales mix- Exploring new markets- Make or buy decisions
WEEK 12	Change versus status quo -expand or contract – shut down or continue - Inflation Accounting – Human Resource Accounting.
WEEK 13	Cost Management
WEEK 14	Reconciliation of cost and financial statement
WEEK 15	Contract Costing – Escalation clause

Dr. AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: II M.Com

Semester: III

Subject Code: 19PCCOC3

Name of the Subject: INTERNATIONAL BUSINESS

Subject Incharge: MR.B.ANANDAN

WEEK	TOPICS TO BE COVERED
WEEK 1	International business – meaning – features – factors - International Business Environment - Means of engaging in International Business
WEEK 2	External Influences of International Business – The Human and Cultural Environments facing Business
WEEK 3	Political influence on International Business.
WEEK 4	International Trading Environment.
WEEK 5	WTO – TRIM – TRIP – IPR
WEEK 6	Country Evaluation and Selection – International Economic Organizations.
WEEK 7	Multinational enterprises – meaning – features - Impact of the Multinational Enterprise:
WEEK 8	Evaluating the Impact of the MNE – Economic Impact of the MNE – Operational and Political Impact of International Business
WEEK 9	Balance of Payments
WEEK 10	International Financial Management – meaning – role - International Monetary System
WEEK 11	Foreign Exchange Rates: Basics, Transaction and Economic Exposure – Foreign Direct Investment
WEEK 12	Strategies: Export and Import Strategies, Collaborative Strategies, Sourcing and Production Strategies.
WEEK 13	Recent developments in International Business
WEEK 14	E-business Strategy – International Product Decisions
WEEK 15	Global Supply Chain Management: International Logistics and Distribution.

Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),

VYASARPADI, CHENNAI-39

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (ODD SEMESTER)

CLASS: II M.Com

Semester: III

Subject Code: 19PCCOC4

Name of the Subject: BUSINESS RESEARCH METHODS

Subject Incharge: DR.N.BARATHIDASAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Introduction to Research: Meaning and Definition of Social Research – Objectives of Research –
WEEK 2	Types of Research - Research process
WEEK 3	Criteria of Good Research – Maintaining Objectivity in Research – Problems Encountered by Researchers.
WEEK 4	Problem Formulation – Identifying Research Problem – Sources of Research Problem
WEEK 5	Techniques Involved in Defining a Research Problem – Research Design: Meaning and Importance; Types of Research Designs – Exploratory – Descriptive
WEEK 6	Case Study Design.
WEEK 7	Data Collection: Methods of Data Collection –Observation – Questionnaire & Interviewing – Guidelines for Constructing Questionnaire and Interview Schedule
WEEK 8	Sample Design: Defining Universe and Sampling Unit – Determining Sampling Frame – Probability and Non-Probability Sampling Methods – Sample Size Determination
WEEK 9	Sampling and Non-sampling Errors – Scaling Methods – Hypothesis; Hypothesis Formulation and Hypothesis Testing.
WEEK 10	Data analysis and Interpretation using SPSS: Descriptive statistics – Factor Analysis
WEEK 11	Reliability test – Parametric Analysis – T-test – ANOVA – Correlation – Regression.
WEEK 12	Non-Parametric Analysis – Chi-square – Sign Test.
WEEK 13	Report Writing – Kinds of Research Reports – Steps in Report Writing – Layout of Research Report
WEEK 14	Mechanics in Writing a Research Report
WEEK 15	Precautions in Writing a Research Report

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39
PG AND RESEARCH DEPARTMENT OF COMMERCE
TEACHING PLAN (ODD SEMESTER)**

CLASS: II M.Com

Semester: III

Subject Code: 19PCCOE1

Name of the Subject: CONSUMER RIGHTS AND EDUCATION:

Subject Incharge: MR.B.ANANDAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Consumer Movement in India- Definition of Consumer- Types of Consumer –Problems of Consumer
WEEK 2	Consumerism- Emerging concepts in consumerism:
WEEK 3	Green Consumerism, Cyber Consumerism.
WEEK 4	Right of Consumers- Responsibilities of Consumers
WEEK 5	unfair trade practices-Caveat emptor and Caveat Venditor
WEEK 6	Enforcement of Consumer rights through Public Interest Litigation
WEEK 7	Consumer Protection Act- Main Provisions –Redressal forums
WEEK 8	District Level –State Level and National Level –Powers and Functions
WEEK 9	Filing of Complaints Procedure Regulatory Authorities and OMBUDSMAN
WEEK 10	Consumer related Legislations and Organizations: Prevention of Food Adulteration Act, 1954- Standards of Weights and Measures Act, 1976
WEEK 11	The Drugs and Magic Remedies (Objectionable Advertisement) Act 1954 - Consumer pressure groups-voluntary consumer organizations
WEEK 12	Consumer Protection Councils.
WEEK 13	Consumer awareness and Education in India:Lack of awareness
WEEK 14	Lack of access to information-Methods of creating awareness and promotion of Consumer rights and duti
WEEK 15	Role of media in consumer education

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39
PG AND RESEARCH DEPARTMENT OF COMMERCE
TEACHING PLAN (EVEN SEMESTER)**

CLASS: II M.Com

Semester: IV

Subject Code: 19PDCOC1

Name of the Subject: INCOME TAX LAW AND PRACTICE

Subject Incharge: DR. K.BASKARAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Capital Gains – Definition – Kind of Capital assets
WEEK 2	Exempted Capital Gains
WEEK 3	Computation of Capital Gains.
WEEK 4	Income from Other Sources – Income chargeable to tax
WEEK 5	Deductions – Bond washing transactions
WEEK 6	Computation of income from other sources
WEEK 7	Set off and Carry forward of Losses
WEEK 8	Deductions from Gross Total Income.
WEEK 9	Deductions from Gross Total Income.
WEEK 10	Assessment of Individuals
WEEK 11	Computation of total income and tax liability
WEEK 12	Assessment of firms.
WEEK 13	Administration of the income tax Act – income tax authorities
WEEK 14	CBDT – powers – Assessing officer - Procedure for assessment – Types of assessment
WEEK 15	Advance Payment of Tax – Deduction of tax at source – Filing of return – Types of filing – PAN.

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: II M.Com

Semester: IV

Subject Code: 19PDCOC2

Name of the Subject: FINANCIAL MARKET INSTITUTION

Subject Incharge:DR.T.K.KARBAGAM

WEEK	TOPICS TO BE COVERED
WEEK 1	Introduction: Financial markets - meaning - definition - role - functions - constituents - financial instruments
WEEK 2	Money market: meaning - characteristics - importance - general functions - segments - financial institutions - characteristics of developed money market
WEEK 3	Call money market: meaning - features - benefits - Indian call money market
WEEK 4	Commercial paper market: meaning –features - importance - developed bill market - shortcomings of Indian bill market - Bill Market Scheme, 1952 and 1970 - Bill market Scheme, 1970
WEEK 5	Certificate of Deposit (CD) market: meaning - features - Treasury Bill Market: meaning - Treasury Bills - general features - Indian TBs - Benefits -
WEEK 6	Gilt-edged securities market: meaning - features - importance of gilt-edged market and Govt. bonds.
WEEK 7	Capital Market: Meaning –characteristics – Stock exchange – features and functions – Listing – National Stock Exchange
WEEK 8	New Issues Market (NIM) – meaning – Advantages - NIM and secondary market – methods of marketing securities
WEEK 9	Intermediaries in NIM – Book building – insider trading and investor protection.
WEEK 10	Financial service institutions – Clearing Corporation of India Limited – settlement of risks – risk management system – benefits
WEEK 11	CRISIL – range of services – CIBIL – credit information – credit assessment – mechanism – credit information report
WEEK 12	DFHIL – ICRA – OTCEI – NSDL.
WEEK 13	Financial Institutions–meaning – special characteristics – cooperative banking institutions
WEEK 14	National Housing Bank – functions and working
WEEK 15	EXIM bank of India – functions and working – NABARD – functions and working – RBI – functions and working – NBFCs – FIIs – role and danger – IMF – World Bank – IFC – ADB.

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: II M.Com

Semester: IV

Subject Code: 19PDCOE1

Name of the Subject: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Subject Incharge:MR.B.ANANDAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Investment-definition, Nature and scope of investment management
WEEK 2	Investment objectives – Features of an Investment programme
WEEK 3	Types of investment alternatives
WEEK 4	Risk and return-Concept of Risk and return – Types of risk
WEEK 5	Systematic, Unsystematic and other risks
WEEK 6	Measurement of risk and return
WEEK 7	Approaches to security analysis – Fundamental analysis
WEEK 8	Economic, Industry and Company analysis
WEEK 9	Technical analysis – Chart methods.
WEEK 10	Efficient market theory – Random Walk Theory
WEEK 11	Options and futures-put, call,
WEEK 12	valuation, characteristics and difference.
WEEK 13	Portfolio Management – Process
WEEK 14	Principles of portfolio management – Markowitz theory – Sharpe's Optimization
WEEK 15	Dow Theory-CAPM – SML – CML.

**Dr.AMBEDKAR GOVERNMENT ARTS COLLEGE (AUTONOMOUS),
VYASARPADI, CHENNAI-39**

PG AND RESEARCH DEPARTMENT OF COMMERCE

TEACHING PLAN (EVEN SEMESTER)

CLASS: II M.Com

Semester: IV

Subject Code: 19PDCOE2

Name of the Subject: CUSTOMER RELATIONSHIP MANAGEMENT

Subject Incharge:DR.V.RAVICHANDRAN

WEEK	TOPICS TO BE COVERED
WEEK 1	Understanding customers: Customer information Database – Customer Profile Analysis – Customer perception
WEEK 2	Expectations analysis – Customer Behavior in relationship perspectives; individual and group customers
WEEK 3	Customer life time value – Selection of Profitable customer segments
WEEK 4	CRM structures: Elements of CRM – CRM Process – Strategies for Customer acquisition
WEEK 5	Retention and Prevention of defection – Models of CRM
WEEK 6	CRM road map for business applications.
WEEK 7	CRM Planning and Implementation: Strategic CRM planning process – Implementation issues – CRM Tools- Analytical CRM
WEEK 8	Operational CRM – Call Centre management – Role of CRM Managers – CRM Implementation Road Map
WEEK 9	Developing a Relationship Orientation – Customer-centric Marketing Processes – Customer retention plans
WEEK 10	Service quality: Concept of Quality – Meaning and Definition of Service Quality
WEEK 11	Factors influencing customer expectations and perceptions – Types of Service Quality – Service Quality Dimensions
WEEK 12	Service Quality Gaps – Measuring Service Quality – Service Quality measurement Scales.
WEEK 13	Trends in CRM: CRM Solutions – Data Warehousing – Data mining for CRM
WEEK 14	CRM software packages – The Technological Revolution: Relationship Management
WEEK 15	Changing Corporate Cultures.

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: B.A, ECONOMICS

COURSE CODE: 19UCECA3

COURSE NAME: MICRO ECONOMICS

SEMESTER NO: III

STAFF NAME: Dr .A.VIJAYAKANTH

WEEK	TOPICS TO BE COVERED
Week-1	Definition Of Economics
Week-2	Scope Of Micro Economics
Week-3	Units Of Analysis: – The Market Mechanism And Resource Allocation.
Week-4	The Concept Of Demand – Law Of Demand – The Demand Curve
Week-5	Change In Demand And Quantity Demanded – Determinants - Elasticity Of Demand
Week-6	Types - Supply – Law Of Supply – The Supply Curve – Determinants – Elasticity : Types.
Week-7	The Concept Of Equilibrium – Demand - Supply Interaction
Week-8	Price As OutcomeOf Demand - Supply Interaction
Week-9	And Market Equilibrium – Consumer Surplus And Producer Surplus.
Week-10	The Concept Of Utility – Ordinal And Cardinal Utility
Week-11	Total And MarginalUtility – The Law Of Diminishing Marginal Utility
Week-12	Law Of Equi-Marginal Utility.
Week-13	The Indifference Curves And Maps
Week-14	Properties Of Indifference Curves – Marginal Rate Of Substitution
Week-15	The Budget Line – Price And Substitution Effects – Consumer And Producers Equilibrium

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: M.A, ECONOMICS

COURSE CODE: 22PAECC1

COURSE NAME: ADVANCED MICRO ECONOMICS

SEMESTER NO: I

STAFF NAME: Dr .A.VIJAYAKANTH

WEEK	TOPICS TO BE COVERED
Week-1	Indifference Curves – Price Effect, Substitution Effect And Income Effect.
Week-2	Comparative Demand Curves – Slutsky’s And Hicksian Demand Curves - Consumer Surplus
Week-3	Marshall’s And Hicksian Measures - Revealed Preference Theorem – N-M Theorem And Method Of Measuring Utility.
Week-4	Perfect Competition – Price And Output Determination – Monopoly – Short Run And Long Run Equilibrium - Price Discrimination
Week-5	Monopolistic Competition–Chamberlin Model- Selling Costs - Excess Capacity - Oligopoly – Non-Collusive Models
Week-6	Cournot - Bertrand – Chamberlin – Edgeworth – Sweezy – Stackelberg- Oligopoly - Collusive Models - Cartels - Price Leadership – Monopsony
Week-7	Duopoly Price Game-Dominant Strategy - Nash Equilibrium
Week-8	Full Cost Pricing Rule-Bain’s Limits Pricing Theory
Week-9	Sylos - Labini Model- Input-Output Model.
Week-10	Neo-Classical Approach – Marginal Productivity Theory; Product Exhaustion Theorem
Week-11	Hick’s Technical Progress- Modern Theory Of Distribution – Determination Of Wages
Week-12	Labour Supply And Wage Determination – Role Of Trade Unions And Collective Bargaining.
Week-13	Informational Asymmetry – Market For Lemons- Adverse Selection
Week-14	Insurance Market And Adverse Selection
Week-15	Solution To Principal Agent Problem - Signaling And Screening.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE (A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE:B.A, ECONOMICS

COURSE CODE:22UAECC2

COURSE NAME: STATISTICS FOR ECONOMICS

SEMESTER NO: I

STAFF NAME:R. SUNDARAMOORTHY

WEEK	TOPICS TO BE COVERED
Week-1	Introduction – Nature and Scope of Statistics – Uses and Limitations of Statistics Collection of data
Week-2	- Census vs Sampling: Advantages and Limitations – Primary and Secondary data – Methods of collecting Primary Data
Week-3	Requisites of good questionnaire - Classification and tabulation of data - sources of secondary data.
Week-4	Classification of data – Rules of Tabulation - Frequency distribution – Methods of constructing class intervals in a frequency distribution
Week-5	Cumulative frequency distribution - Diagram
Week-6	types. Graphic representation of data – Histogram – frequency polygon, frequency.
Week-7	Measure of central Tendency– Mean, Median and mode – Relative merits and demerits – Requisites of a good average
Week-8	Measures of dispersion – range, mean deviation, quartile deviation, standard deviation, Co-efficient of variation
Week-9	Relative merits and demerits.
Week-10	Correlation – Karl Pearson's correlation
Week-11	Spearman's Rank Correlation, Simple Regression
Week-12	equations - distinction between correlation and Regression.
Week-13	Index numbers – Aggregative and relative index – Chain and fixed based index
Week-14	whole sale index – cost of living index. Analysis of time series – straight line
Week-15	– semi average – moving average – measurement of seasonal variations.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: B.A, ECONOMICS

COURSE CODE: 19UCECC2

COURSE NAME: MONETARY ECONOMICS

SEMESTER NO: II

STAFF NAME: R. SUNDARAMOORTHY

WEEK	TOPICS TO BE COVERED
Week-1	Classical theory of money. Keynesian Monetary theory
Week-2	James Tobin's Portfolio analysis of Money Demand.
Week-3	Milton Friedman's reformulated quantity theory.
Week-4	Monetarism and Keynesianism- Comparison.
Week-5	Determinants of money Supply
Week-6	Money Multiplier. Supply side policies of Inflation.
Week-7	Money market and capital market in India. The Role of Financial Intermediaries
Week-8	Effect of Financial intermediation of the Cost and Availability of finance. Non
Week-9	banking financial institutions in India
Week-10	Commercial Banks and Multiple credit creation function
Week-11	Commercial Bank's role after nationalization
Week-12	RBI's role in Economic Development.
Week-13	Monetary policy operation in India
Week-14	Limitation of Monetary policy
Week-15	Effects of Debt management policy.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: M.A, ECONOMICS

COURSE CODE :22PAECC3

COURSE NAME: Statistics For Economists

SEMESTER NO: I

STAFF NAME : R. SUNDARAMOORTHY

WEEK	TOPICS TO BE COVERED
Week-1	Sampling – Random Sampling – Randomized Experiments
Week-2	Data Collection- Primary and Secondary Data – Sampling Methods
Week-3	Classification of Data – Graphic and Diagrammatic Representation
Week-4	Descriptive Statistics – Centre of Distribution – Mean, Median and Mode
Week-5	Use of Various Measures of Average – Spread of a Distribution
Week-6	Range – Quartile Deviation – Mean Deviation – Standard Deviation
Week-7	Relationship between variables – Correlation Techniques
Week-8	Regression Analysis – Fitting Least Squares Lines – Standard Error of the Estimates
Week-9	Index Numbers – Time Series Analysis
Week-10	The Significance of Mean and other statistics – Standard Error of Mean
Week-11	Standard Error of Standard Deviation – The Distribution of ‘t’
Week-12	Degrees of freedom – Level of Significance

Week-13	Degrees of freedom – Level of Significance
Week-14	Testing Procedures
Week-15	Hypothesis Testing using confidence intervals.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: M.A, ECONOMICS

COURSE CODE: 22PBECC3

COURSE NAME: Research Methodology

SEMESTER NO: II

STAFF NAME: R. SUNDARAMOORTHY

WEEK	TOPICS TO BE COVERED
Week-1	Nature of Social Science Research – Research Methods in Social Science – Formulating the problem- Types and Sources of Hypothesis
Week-2	Characteristics of a Good hypothesis- Components and types of research design – Collection of data
Week-3	sources and methods.- Presentation of results – Format of a Report.
Week-4	Sampling; Need, types, Probability sampling, random, systematic, stratified, multistage or cluster sampling, Non Probability sampling;
Week-5	Purposive Judgment, quota and snowball sampling- Data collection; Primary and Secondary data;
Week-6	NSS and census data Methods of data collection- Tools of data collection; schedule and questionnaire.
Week-7	Processing and analysis of data: Editing, coding and tabulation; use of computers in social science research
Week-8	Diagrammatic and graphic representation of data- Interpretation of results and Report writing

Week-9	Preparation of Project Proposals
Week-10	Census Versus sampling -Random and Non-Random sampling Techniques- Estimation – Point and interval estimation
Week-11	Statistics and Parameter – Standard Error – Confidence interval- Null and Alternative hypothesis
Week-12	Type I Error and Type II Error, Level of Significance – Critical region – Steps in Testing of Hypothesis.
Week-13	Properties and uses of Normal Distribution – Standard normal ‘Z’ Statistic
Week-14	Z-Test of Significance of proportions, means and Correlation-
Week-15	t’ Test for sample mean and Equality of mean – Paired ‘t’ Test- Chi-Square Test. Text Books

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039**

PG & RESEARCH DEPARTMENT OF ECONOMICS

LESSON PLAN

ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)

DEGREE: M.A., ECONOMICS

COURSE CODE:

COURSE NAME: Population Studies

SEMESTER NO: III

STAFF NAME : R. SUNDARAMOORTHY

WEEK	TOPICS TO BE COVERED
Week-1	Demography- meaning and definition, nature of demography, scope of demography, importance of demography; theories of population growth
Week-2	the Malthusian theory of population and its criticism, the optimum theory of Population and its criticism
Week-3	the theory of demographic transition and its criticism.
Week-4	Determinants of population growth – fertility, meaning of fertility, crude birth rate, total fertility rate, gross reproduction rate, net factors affecting fertility. Mortality
Week-5	meaning of mortality, crude death rate. Infant mortality rate-meaning, causes of infant mortality.

Week-6	Factors affecting mortality, causes of decline in mortality rate in developing countries, factors responsible for declining mortality rate in India. Migration – meaning, types of migration, factors leading to internal and external migration, effects of migration.
Week-7	Meaning – types of population projection, methods of population projection, importance of population projection; sources of demographic data
Week-8	population census, meaning, methods of census, salient features, uses of census, problems of census
Week-9	registration method, sample survey, sources of demographic data in India
Week-10	Population explosion- meaning, causes for rapid growth of population in India; causes for high birth rate- causes of decline of death rate in India.
Week-11	. Effects of population growth on economic development, factor promoting economic development, factor retarding economic development,
Week-12	effect of population growth on Indian economy-measures to control population growth in India.
Week-13	population policy – introduction, government policy to control population growth; national population policy 2000- objective, feature and short coming; family planning in India
Week-14	meaning, need for family planning in India, achievements,
Week-15	criticisms of family planning programme, suggestions to improve and expand family planning programme.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039**

PG & RESEARCH DEPARTMENT OF ECONOMICS

LESSON PLAN

ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)

DEGREE: M.A. ECONOMICS

COURSE CODE:

COURSE NAME: Human Resource Development

SEMESTER NO: IV

STAFF NAME : R. SUNDARAMOORTHY

WEEK	TOPICS TO BE COVERED
Week-1	Human Resource Development – Evolution of HRD - Relationship with HRM - Human Resource Development Functions

Week-2	Roles and Competencies of HRD Professionals - Challenges to Organization and HRD professionals
Week-3	Employee Behaviour – External and Internal Influence – Motivation as Internal Influence – Learning and HRD – Learning Strategies and Styles.
Week-4	Frame work of Human Resource Development - HRD Processes - Assessing HRD Needs - HRD Model
Week-5	Designing Effective HRD Program - HRD Interventions- Creating HRD Programs - Implementing HRD programs
Week-6	Training Methods - Self Paced/Computer Based/ Company Sponsored Training - On-the-Job and Off-the-Job - Brain Storming
Week-7	Evaluating HRD programs - Models and Frame Work of Evaluation - Assessing the Impact of HRD Programs
Week-8	Human Resource Development Applications - Fundamental Concepts of Socialization
Week-9	Realistic Job Review.
Week-10	Management Development - Employee counseling and wellness services – Counseling as an HRD Activity
Week-11	Counseling Programs - Issues in Employee Counseling - Employee Wellness and Health Promotion Programs
Week-12	Organizational Strategies Based on Human Resources.
Week-13	Work Force Reduction, Realignment and Retention - HR Performance and Bench Marking
Week-14	Impact of Globalization on HRD- Diversity of Work Force - HRD programs for diverse employees
Week-15	Expatriate & Repatriate support and development

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039**

PG & RESEARCH DEPARTMENT OF ECONOMICS

LESSON PLAN

ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)

DEGREE: B.A, ECONOMICS

COURSE CODE: 22UECC4

COURSE NAME: HISTORY OF ECONOMIC THOUGHT

SEMESTER NO: V

STAFF NAME : R. SUNDARAMOORTHY

WEEK	TOPICS TO BE COVERED
-------------	-----------------------------

Week-1	Mercantilism: Main Principles- Physiocracy:
Week-2	Natural order – Agriculture and net product
Week-3	Social classes
Week-4	Adam Smith- Division of labour- theory of value- Laissez faire- canons of taxation - Ricardo: Theory of Rent
Week-5	Comparative advantage theory of trade- Malthus: The Principle of population
Week-6	Proposals to check population growth.
Week-7	The Marginalist revolution- Marshall: Value and role of time
Week-8	Marginal Utility and Consumer's surplus
Week-9	Distribution – Marshallian concepts – Representative firm, Economies of scale, Quasi-rent- Veblen: Institutionalism
Week-10	Keynes – Psychological law of consumption
Week-11	MPC- Investment multiplier- Theory of employment- national income level
Week-12	Schumpeter's theory of development, Hicks theory of trade cycle- New classical Economics – Rational Expectation hypothesis.
Week-13	Naoroji drain theory- Gandhian Economics: Sarvodaya
Week-14	Trusteeship – Views on Industrialisation- Ambedkar
Week-15	Contribution is to monetary economics- Sen – Choice of Technique – Theory of Entitlement – Sex bias in Poverty.

Subject-in-Charge

HOD

DEPARTMENT OF ECONOMICS

Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039

M.A.,Degree Programme in ECONOMICS

Teaching Plan (EVEN- Semester (2022-23))

Class : B.A,ECONOMICS

Subject Code: 22UECC3

SEMESTER:V

Subject Name: Fiscal Economics

STAFF NAME : R. SUNDARAMOORTHY

Week	Topics to be Covered
Week-1	Role of public finance - Major Fiscal functions

Week-2	Private and Public goods – Mixed goods
Week-3	Merit goods- Social goods-Market failure Public goods and externalities.
Week-4	Theories of Public Expenditure – Musgrave
Week-5	Growth of Public Expenditure
Week-6	Canons and Evaluation of Public Expenditure.
Week-7	Direct and Indirect taxation – Canons and Principles of Taxation
Week-8	Theory of optimal taxation – modern theory of incidence- Classification and Sources of public debt
Week-9	Burden of public debt – Principles of public debt– Methods of repayment of public debt – deficit financing
Week-10	Objectives and Instruments of Fiscal policy –Fiscal policy for Economic stability and growth– Effectiveness of fiscal policy- Fiscal federalism
Week-11	Role of finance commission – Principles – Recommendations of the latest Finance Commission
Week-12	Transfer of resources from Union and States and States to Local Bodies- budget reforms.
Week-13	Financial Autonomy in India – Tax Reform proposals of Kelkar Committee- Tax structure and Working of Fiscal federalism in India
Week-14	Resource transfer from union to State– Value Added Tax – MVAT- goods and service Tax (GST)
Week-15	Fiscal consolidation in India since 2001-2002 – Fiscal responsibilities of central and state- Central and State government Budgets – Issues of fiscal deficit.

Subject-in-Charge

HOD

DEPARTMENT OF ECONOMICS

Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039

B.A.,Degree Programme in ECONOMICS

Teaching Plan (ODD- Semester (2022-23))

Class : B.A, ECONOMICS

Semester :I

Subject Code: 22UAECA1

Subject Name:PRINCIPLES OF ECONOMICS

STAFF NAME :DR.C.NARAYANAN

Week	Topics to be Covered
Week-1	Definition and Meaning of Marketing – Modern concept of marketing
Week-2	marketing and selling – marketing functions – Buyin
Week-3	Transportation – Warehousing – standardization – Grading – Packaging.
Week-4	Buyers behavior – Buying motive – market segmentation

Week-5	marketing strategies – product planning and development
Week-6	introduction of a new product.
Week-7	Product Life cycle
Week-8	Product Diversification
Week-9	pricing methods.
Week-10	Promotional methods
Week-11	Advertising – Publicity
Week-12	personal selling - Sales promotion.
Week-13	Marketing Research – Importance in Marketing decisions
Week-14	marketing of industrial products – marketing of consumer products
Week-15	marketing of services – marketing of agricultural products.

Subject-in-Charge

HOD

DEPARTMENT OF ECONOMICS
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
Teaching Plan (EVEN- Semester (2022-23))

Class : Semester :II

Subject Code: 22UBECC2

Subject Name:TAMIL NADU ECONOMY

STAFF NAME :DR.C.NARAYANAN

Week	Topics to be Covered
Week-1	Growth and development- Ingredients of economic growth- Sectoral growth in perspective
Week-2	Inter-state Growth profiles- Economic development and structural Transformation
Week-3	SDP trends-Planning.
Week-4	Theory of Demographic Transition – Trends in Growth of Population
Week-5	Sex ratio, Density, Literacy, Birth and Death rate-
Week-6	Urbanisation – Population Policy 2001. – Unemployment and Poverty.
Week-7	Agriculture – Cropping Pattern – Irrigation – Agricultural Development in Tamil Nadu- Green Revolution – Agricultural marketing:
Week-8	regulated markets and Co- operative marketing – Non- Farm activities in Tamil Nadu
Week-9	Food Security and Public distribution system.
Week-10	Trends in Industrial Development in Tamil Nadu – Factors contributing to Industrial Development in Tamil Nadu
Week-11	Small Scale Industries: Role , Problems , Promotional Measures for SSI - TIDCO, TANSI, SIPCOT, DI
Week-12	Economic Liberalisation Vis-a - Vis Industrial Growth.
Week-13	Transport and Economic development- Nationalisation of Roadways- performance of public sector transports-
Week-14	
Week-15	

Subject-in-Charge

HOD

DEPARTMENT OF ECONOMICS
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
I B.A Degree Programme in ECONOMICS
Teaching Plan (ODD- Semester (2022-23))

Class I B.A, ECONOMICS

Semester: I

Subject Code : 19UCECA3

Subject Name: : TAMIL NADU ECONOMY

STAFF NAME :DR.C.NARAYANAN

Week	Topics to be Covered
Week-1	Growth and development- Ingredients of economic growth
Week-2	ectoral growth in perspective- Inter-state Growth profiles-
Week-3	Economic development and structural Transformation-SDP trends-Planning
Week-4	Theory of Demographic Transition – Trends in Growth of Population
Week-5	Sex ratio, Density, Literacy, Birth and Death rate- Urbanisation
Week-6	Population Policy 2001. Composition of workforce – Unemployment and Poverty.
Week-7	Agriculture – Cropping Pattern – Irrigation – Agricultural Development in Tamil Nadu- Green Revolution
Week-8	Agricultural marketing: regulated markets and Co- operative marketing
Week-9	Non- Farm activities in Tamil Nadu- Food Security and Public distribution system.
Week-10	Trends in Industrial Development in Tamil Nadu – Factors contributing to Industrial Development in Tamil Nadu
Week-11	Small Scale Industries: Role , Problems , Promotional Measures for SSI - TIDCO, TANSI, SIPCOT, DIC
Week-12	Economic Liberalisation Vis-a - Vis Industrial Growth
Week-13	Transport and Economic development- Nationalisation of Roadways- performance of public sector transports-
Week-14	Power development in Tamil Nadu-Rural Electrification. Social inputs and its development effects:
Week-15	Health, Education, Nutrition, water supply and environment

Subject-in-Charge

HOD

DEPARTMENT OF ECONOMICS
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
B.A.,Degree Programme in ECONOMICS
Teaching Plan (EVEN- Semester (2022-23))

Class : II.B.A., ECONOMICS

Semester:III

Subject Code: 19UDECA4

Subject Name: AGRICULTURAL ECONOMICS

STAFF NAME :DR.C.NARAYANAN

Week	Topics to be Covered
Week-1	Scope and Significance of Agriculture
Week-2	Agriculture and Industry - A Comparison- Role of Agriculture in India's Development-
Week-3	Inter-Sectoral Linkage - An Overview.
Week-4	Production Function Analysis - Relevance to Farm Production Economics- Productivity Trends; Low production and Productivity
Week-5	Causes, Consequences and Measures.-Size - Efficiency relations in Indian agriculture - Role of Technology in Agriculture - Structural Changes in Agriculture.
Week-6	Agricultural Labour: Types – Supply of Labour – Problems-Rural Unemployment:
Week-7	Types, consequences and remedial measures- Minimum wages for agricultural workers
Week-8	An evaluation- Poverty Eradication programmes – Recent Wage and Self-Employment Programmes.
Week-9	Agricultural Finance: Meaning, Nature, Types, Sources and Problems of Agricultural Finance
Week-10	operatives in Rural Finance-
Week-11	Role of Commercial Banks and NABARD in Rural Finance.
Week-12	Agricultural Price policy
Week-13	Objectives, instruments and impact
Week-14	Economic Reforms and Agricultural policy
Week-15	WTO and Agriculture

Subject-in-Charge

HOD

DEPARTMENT OF ECONOMICS

Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039

B.A.,Degree Programme in ECONOMICS

Teaching Plan (ODD- Semester (2022-23))

Class : III B.A., ECONOMICS

Semester:V

Subject Code:19UFECC3

Subject Name:INTERNATIONAL ECONOMICS

STAFF NAME :DR.C.NARAYANAN

Week	Topics to be Covered
Week-1	Subject matter of international economics – Internal Trade
Week-2	Inter-regional trade – International trade
Week-3	features – Advantages and Dis-Advantages - Balance of trade
Week-4	Adam Smith's absolute advantage theory
Week-5	comparative advantage theory of trade - Reciprocal Demand Theory (J.S.Mill)
Week-6	Heckscher - Ohlin Theory-factor endowments
Week-7	Gains from trade – Trade Policy – Free Trade: Meaning
Week-8	Case for and against Free Trade - Protection
Week-9	Meaning - Arguments for and Against Protection.
Week-10	Tariff: Meaning and types
Week-11	Effects of Tariff. Quotas: Meaning and Types
Week-12	Effects of quotas on imports
Week-13	Balance of payments – current account and capital account – deficit in balance of payments
Week-14	surplus in balance of payments - Disequilibrium in BOP & BOT
Week-15	Causes for disequilibrium in BOP - Measures for correcting disequilibrium .

Subject-in-Charge

HOD

DEPARTMENT OF ECONOMICS
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
B.A.,,Degree Programme in ECONOMICS
Teaching Plan (EVEN- Semester (2022-23))

Class : III.B.A.,ECONOMICS

Semester:V

Subject Code: 19UFECE1

Subject Name: **MANAGERIAL ECONOMICS**

STAFF NAME :DR.C.NARAYANAN

Week	Topics to be Covered
Week-1	Definition – meaning – nature and scope of Managerial Economics
Week-2	Role and responsibility of Managerial economists – Demand forecasting – meaning
Week-3	methods – Criteria for good forecasting – Firm and Industry – differences – Objectives of the firm.
Week-4	Risk and Uncertainty – Elements of Decision Theory
Week-5	Classification of Managerial Problem – Certainty and uncertainty
Week-6	Cost control and Cost reduction.
Week-7	Price discrimination: First degree, Second degree and third degree price discrimination- Approached to
Week-8	Pricing: (a) Cost-plus pricing (b) target return pricing (c) product life cycle
Week-9	pricing: skimming strategy-penetration strategy (d) transfer pricing.
Week-10	Need for capital budgeting – forms of capital budgeting
Week-11	Nature of capital budgeting problem
Week-12	Accounting Profit and Economic Profit –
Week-13	Theories of Profit.
Week-14	The investment selection process- Estimating cash flows
Week-15	Evaluating Investment: (a) payback method (b) net present value method- The cost of capital (a) dividend valuation model (b) Capital –asset pricing model

Subject-in-Charge

HOD

DEPARTMENT OF ECONOMICS
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
TEACHING PLAN –(ODD) SEMESTER (2022-2023)

CLASS M.A., ECONOMICS

Semester: I

SUBJECT CODE:22PAECE2A

SUBJECT NAME: Economics of Infrastructure

STAFF NAME :DR.C.NARAYANAN

WEEK	TOPIC TO BE COVERED
WEEK 1	Introduction - Infrastructure and economic development
WEEK 2	Infrastructure as a public good; Social and physical infrastructure; Special characteristics of public utilities
WEEK3	The peak-load – Off-Load Problem – Dual Principle Controversy; Economies of scale of Joint supply; Marginal Cost Pricing vs. other methods of pricing in public utilities.
WEEK4	Transport Economics – The structure of Transport Costs and Location of Economic Activities. Demand for Transport
WEEK5	Models of Freight and Passenger Demand – Model Choice; Cost Functions in the Transport Sector
WEEK 6	Principle of Pricing – Special Problems of Individual Modes of Transport; Inter-modal condition in the Indian Situation.
WEEK 7	Energy Economics – Primacy of Energy in the Process of Economic Development – Factors Determining Demand for Energy;
WEEK 8	Effects of Energy Shortages – Energy Conservation – Renewable and Non- conventional Sources of Energy
WEEK 9	Energy Modelling– The Search for an Optimal Energy Policy in the Indian Context.
WEEK 10	Electricity, Gas and Water Supply- Bulk Supply and Pricing of Electricity – The Relative Economics of Thermal, Hydel and Nuclear Power Plants
WEEK 11	The Case for a National Power Grid – Financing Water Utilities
WEEK 12	Urban and Rural Water Supply – The Exploitation of Natural Gas – Pricing Problem.
WEEK 13	Social Infrastructure – Education and Economic Growth – The Case for Universal, Free, Primary Education; Structure of higher education and problems of its financing in India
WEEK 14	Human Resources and Human Capital Development - Health dimensions of development; Determinants of Health - poverty, malnutrition, illiteracy and lack of information; Demand and supply of health care; Financing of
WEEK 15	healthcare; Inequalities in health - class and gender perspectives; Institutional issues in health care delivery.

Subject-in-Charge

HOD

DEPARTMENT OF ECONOMICS
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
TEACHING PLAN –EVEN SEMESTER (2022-2023)

CLASS :I M.A.,ECONOMICS

Semester:II

SUBJECT CODE: 22PBECD1

SUBJECT NAME: Agricultural Economics

STAFF NAME :DR.C.NARAYANAN

WEEK	TOPIC TO BE COVERED
WEEK 1	Nature and role of agriculture in economic development - Farm Organisation - Agricultural Production
WEEK 2	Agri-based and Agro-based markets; Inter-sectoral linkages of Agriculture
WEEK3	Efficiency of irrigation and fertilizers on agricultural production.
WEEK4	Transformation of traditional agriculture
WEEK5	Mellor's Theory of Agricultural Development, Boserup's
WEEK 6	Theory of Agricultural Growth, Fei-Ranis, Dale Jorgenson and Schultz Theory of Transformation of Traditional Agriculture.
WEEK 7	Agricultural Markets and Marketing Efficiency - Marketing functions and costs; Market Structure and Imperfections; Regulated Markets; Marketed and marketable surplus; Behaviour of Agricultural Prices -
WEEK 8	Cobweb model; Price and Income Stability; State Policy with respect to agricultural marketing; Warehousing
WEEK 9	Prices; crop insurance; Need for State intervention; Objectives of Agricultural Price Policy.
WEEK 10	Role of Capital and Rural Credit; Organized and Unorganized Capital Market; Rural savings and Capital formation; Characteristics and sources of rural credit
WEEK 11	Institutional and non-institutional; Reorganization of rural credit
WEEK 12	Cooperation in India Cooperative movement, Problems and prospects of Cooperative Institutions, Commercial Banks, Regional Rural Banks; Role of NABARD.
WEEK 13	Sustainable Agriculture — Indigenous Practices; Bio-technological practices and growth potential
WEEK 14	Agri-technology start-ups -Genetically Modified Crops (GMO) - Organic farming
WEEK 15	Problems and prospects of Indian Agriculture with specific focus on Globalization of Indian Economy.

Subject-in-Charge

HOD

DEPARTMENT OF ECONOMICS
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
TEACHING PLAN –ODD SEMESTER (2022-2023)

CLASS : M.A., ECONOMICS

Semester:III

SUBJECT CODE:19PCECC2

SUBJECT NAME: MONETARY ECONOMICS

STAFF NAME :DR.C.NARAYANAN

WEEK	TOPIC TO BE COVERED
WEEK 1	Quantity theories of money – Fisher and Cambridge- Keynesian monetary theory-
WEEK 2	James Tobin's portfolio analysis of money demand- Don Patinkin's Integration–
WEEK3	Real Balance Effect- Milton Friedman's reformulated quantity theory.
WEEK4	Types and determinants of money supply
WEEK5	money multiplier- Theories of interest rate
WEEK 6	classical – Keynes – Hicks – Hansen.
WEEK 7	Significance and functions of Money market and capital market
WEEK 8	Role of financial intermediaries – Effects of financial intermediation-
WEEK 9	Non-banking financial institutions – Gurley and Shaw theory.
WEEK 10	Functions of Commercial banks - Credit creation – process and limitations- Role of Commercial banks after nationalization –
WEEK 11	reforms- Role of RBI – Regulation of money supply and credit
WEEK 12	Narashimham Committee Reports– 1991 and 1998- RaguramRajan Committee Report -2007.
WEEK 13	Objectives and Instruments of Monetary policy–
WEEK 14	Limitations of monetary policy- Monetarism and Keynesianism
WEEK 15	Comparison - Supply side policies

Subject-in-Charge

HOD

DEPARTMENT OF ECONOMICS
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
TEACHING PLAN –EVEN SEMESTER (2022-2023)

CLASS :II M.A. ECONOMICS

Semester:IV

SUBJECT CODE: 19PDECC4

SUBJECT NAME: MANAGERIAL ECONOMICS

STAFF NAME :DR.C.NARAYANAN

WEEK	TOPIC TO BE COVERED
WEEK 1	Meaning - role and responsibilities of entrepreneurs in business decisions
WEEK 2	conflict management analysis: Market Management
WEEK3	Demand forecasting – methods of demand forecasting.
WEEK4	Advertisement and Sales Promotion Analysis: Selling costs and Demand Curve - Selling Costs and Profits
WEEK5	advertising cost - shape of Advertising cost curve - Determining Advertisement Budget – Optimal Allocation of Advertising Budget between different media
WEEK 6	Product Innovations - advertisement Effectiveness
WEEK 7	Pricing practices and strategies - General considerations in pricing and price forecasting
WEEK 8	Profit management analysis: Profit policies -
WEEK 9	Profit Planning and control - Break even Analysis - Ration analysis - Theories of Profit - FIFO and LIFO method - Treatment of Capital Gains and Losses.
WEEK 10	Pricing practices and strategies - General considerations in pricing and price forecasting – Profit management analysis: Profit policies -
WEEK 11	Profit Planning and control - Break even Analysis - Ration analysis -
WEEK 12	Theories of Profit - FIFO and LIFO method - Treatment of Capital Gains and Losses.
WEEK 13	Long -Run Decisions and Resources Allocation - Capital Budgeting - Planning and Management of Capital Investment -
WEEK 14	Techniques of Project appraisal - Investment Decision -
WEEK 15	Evaluation of Investment Proposals Problems of resources Allocation - Cost of capital.

Subject-in-Charge

HOD

DEPARTMENT OF ECONOMICS
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
TEACHING PLAN –EVEN SEMESTER (2022-2023)

CLASS :I.B.A. ECONOMICS

SUBJECT CODE: 22UAECC1

Semester: I

SUBJECT NAME: Indian Economy - I

STAFF NAME :DR.M.SIVAKUMAR

WEEK	TOPIC TO BE COVERED
WEEK 1	The concept of an economic system – economic systems – capitalism – socialism- mixed economy
WEEK 2	India as mixed economy – salient characteristics of Indian economy
WEEK3	share of GDP from primary , secondary and tertiary sectors.
WEEK4	Overview of Indian economic development in colonial period – agriculture – land tenure systems
WEEK5	drain of resources by Britain
WEEK 6	Indian economy at the time of Independence.
WEEK 7	The arguments for planning in the Indian context - Five Year Plans
WEEK 8	goals of Five Year Plans – growth – modernization – self-reliance
WEEK 9	equity – role of state – the role of Planning Commission.
WEEK 10	Agricultural development - Land reforms – The Green Revolution – state policy for agricultural development
WEEK 11	performance of agricultural sector - Industrial development - role of public sector
WEEK 12	state policy for industrial development for cottage and small scale industrial units - industrial development of backward regions - performance of Industrial sector.
WEEK 13	Import substitution as India's trade strategy –consequences of import substitution – poverty in India
WEEK 14	definition of poverty – causes of poverty – policies for poverty reduction
WEEK 15	trickle-down vs. direct targeting – India's poverty alleviation strategy.

Subject-in-Charge

HOD

DEPARTMENT OF ECONOMICS
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
TEACHING PLAN –EVENSEMESTER (2022-2023)

CLASS : II.B.A, ECONOMICS

Semester:III

SUBJECT CODE:19FECC2

SUBJECT NAME: FISCAL ECONOMIS

STAFF NAME :DR. M.SIVAKUMAR

WEEK	TOPIC TO BE COVERED
WEEK 1	Role of public finance - Meaning and scope of public finance - Major Fiscal functions- Distinction between private and public finance
WEEK 2	Private and Public goods – Mixed goods –Merit goods-
WEEK3	Social goods-Market failure Public goods and externalities.
WEEK4	Theories of Public Expenditure – Musgrave – Wagner - Peacock Wiseman
WEEK5	Growth of Public Expenditure
WEEK 6	Canons and Evaluation of Public Expenditure
WEEK 7	Public revenue sources - Distinction between tax revenue and non tax Revenue
WEEK 8	Taxation - Meaning - Sources of taxation - Classification of taxes
WEEK 9	Canons of taxation - Theories of taxation - Impact and incidence of taxation - Effects of taxation.
WEEK 10	Characteristics of a good tax system - Taxable capacity
WEEK 11	Factors determining taxable capacity - Limits -
WEEK 12	Measurements of taxable capacity
WEEK 13	Individual taxes - (with reference to India) Income Tax - Expenditure tax
WEEK 14	Wealth tax - Property tax - Estate duty - Gift tax - Death duty -
WEEK 15	Customs duty - Excise duty - Sales tax - Value added tax – Goods and Service Tax (GST).

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS**

**LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE:

COURSE CODE: 19UFECE1

COURSE NAME: INTERNATIONAL ECONOMICS-II

SEMESTER NO: IV

STAFF NAME: DR.M.SIVAKUMAR

WEEK	TOPICS TO BE COVERED
Week-1	Functions of a foreign exchange market – exchange rates –
Week-2	nominal and real exchange rates – purchasing power parity
Week-3	fixed exchange rate- flexible exchange rates.
Week-4	Foreign Exchange Market: Functions - Transfer function - Credit Function
Week-5	Hedging Function. Theories of Exchange Rate: Mint theory -
Week-6	Purchasing power parity theory - Balance of Payment Theory.
Week-7	Role of foreign capital in economic development – issues in foreign capital in economic development
Week-8	theory of direct investment – issues in foreign direct investment
Week-9	ltinational Corporations - Foreign aid.
Week-10	IMF
Week-11	SDR
Week-12	International Liquidity.
Week-13	Trade and Development – Economic Integration, Meaning, Types
Week-14	World Bank, GATT, WTO.Structure
Week-15	Objectives, Functions and Working.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: M.A., ECONOMICS

COURSE CODE: 22PAECE1A

COURSE NAME: Economics of Climate Change

SEMESTER NO: I

STAFF NAME: DR.M.SIVAKUMAR

WEEK	TOPICS TO BE COVERED
Week-1	The roots of climate change: greenhouse gas emissions and rising global temperature- Climate change and economic development: a) climate change
Week-2	economy transmission mechanisms; b) impact of climate change on human well-being:
Week-3	known and uncertain impacts c) The “tipping points” of dangerous climate change- Impact of climate change on developed and poor economies.
Week-4	The need for climate change mitigation- Economic explanation of climate change: the concept of “market failure” and how it causes climate change
Week-5	Using prices and markets for climate change mitigation: taxes, carbon emissions trading (‘cap-and-trade’) and regulations promoting green technolog
Week-6	Ethics of climate change : limits of cost-benefit analysis.
Week-7	The case for Adaptation to climate change
Week-8	International actio
Week-9	adaptation in developing nations.
Week-10	The fundamentals for natural resource management
Week-11	Economics of water use in context of climate change
Week-12	Climate change and efficient management of agriculture and fisheries- Sustainable energy.
Week-13	Economic incentives for “climate smart”
Week-14	Individual action- National andInternational policies

Week-15	climate smart” innovation and technology diffusion
---------	--

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039**

PG & RESEARCH DEPARTMENT OF ECONOMICS

LESSON PLAN

ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)

DEGREE: M.A., ECONOMICS

COURSE CODE: 19PC1CD2

COURSE NAME: MODERN ECONOMIC THOUGHT

SEMESTER NO: III

STAFF NAME: DR.M.SIVAKUMAR

WEEK	TOPICS TO BE COVERED
Week-1	Post-Keynesian Theory - Post-Keynesian Criticism of Neo-Classical Economics
Week-2	Post- Keynesian Theory of Capital and Income Distribution -
Week-3	Post - Keynesian Theory of Employment.
Week-4	Feminist Economics: Critique of Neo-Classical Economics by Feminist Economics
Week-5	The Provisioning Theory of Gender Definition of Economics –
Week-6	The Andro-Centric nature of Neo-Classical Economics and Feminist Economics” Alternative.
Week-7	New Institutional Economics: Theory of Firm
Week-8	Asymmetric Information
Week-9	Property Rights in New Institutional Economic Theory.
Week-10	Ecological Economics: Distinction between Ecological and Environmental Economics- Economy- Nature Linkages in Ecological Economics Framework –
Week-11	Herman Dally”s Steady State Economy – Deliberative Approach to Environmental Valuation
Week-12	ustainable Development: Eco-Centric vs. Techno-Centric Approaches.
Week-13	Marxian Economics: Marxist Theory of Capitalistic Development
Week-14	Marxian Economic Development
Week-15	Paul Sweezy”s Monopoly Capital – The Dependency Theory of Development

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS**

**LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE: M.A. ECONOMICS

COURSE CODE: 19PDECC3

COURSE NAME: INTERNATIONAL ECONOMICS

SEMESTER NO: IV

STAFF NAME: DR.M.SIVAKUMAR

WEEK	TOPICS TO BE COVERED
Week-1	Comparative Cost Theory - Refinements of Comparative Cost Theory- Modern Theory of Factor Endowments
Week-2	Technological Gap Theory – Vernon’s Product Cycle Theory - Kenen’s Human capital theory- Intra- Industry Trade
Week-3	Theory of Imperfect Competition - Strategic Theory – External Economies and International Trade.
Week-4	BOP Disequilibrium – Adjustment Mechanism: Elasticity Approach, Absorption approach and Monetary Approach- Expenditure changing monetary and fiscal policy –
Week-5	Monetary and Fiscal policies for internal and external balance: The Swan Model and Mundallian Model-
Week-6	Expenditure Switching Policies and Expenditure Reducing Policies – Foreign Trade Multiplier.
Week-7	Foreign Aid - Types of Foreign aid – Advantages and Disadvantages – Factors determining foreign aid - Foreign Investment – Foreign Direct investment
Week-8	Types of FDI – FDI Policy of India- Multinational Corporations – Features of Multinational Corporations -
Week-9	Advantages and Limitations of MNCs – MNCs and International Trad
Week-10	Foreign exchange risk - Sources of foreign exchange risk – types of exchange rate risk - Transaction risk, Translation risk, Economic risk- Measurement of Exchange Rate Risk
Week-11	value-at-risk (VaR) model. Methods of managing foreign exchange risk - internal and external techniques-
Week-12	Forward contracts, Money market hedges, Currency futures, Currency Options, Currency swaps.
Week-13	Economic risk- Measurement of Exchange Rate Risk - value-at-risk (VaR) model.
Week-14	types of exchange rate risk

Week-15	Methods of managing foreign exchange risk -
---------	---

Subject-in-Charge

HOD

Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,

CHENNAI- 600039

PG & RESEARCH DEPARTMENT OF ECONOMICS

LESSON PLAN

ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)

DEGREE: B.A. ECONOMICS

SUBJECT CODE: 19UFCE2

SUBJECT NAME: ENTREPRENEURIAL DEVELOPMENT

SEMESTER NO: VI

STAFF NAME: DR.T.PONSUNMUGARAJA

WEEK	TOPICS TO BE COVERED
Week-1	Concept of Entrepreneur – characters of an Entrepreneur – distinction between Entrepreneur & Manager
Week-2	function & Types of Entrepreneur- Concept Entrepreneurial ship – Role in Economic Development,
Week-3	Women Entrepreneurial ship – function, problems recent trends
Week-4	Economic & Non Economic Factors – Role of Government- Entrepreneurial Motivation –
Week-5	theories – factors- Entrepreneurial Development
Week-6	Need, Objectives, Phases Evaluation.
Week-7	Meaning – Identification – Selection- Project Formation: Meaning and Significance
Week-8	Contents of a Project Report – Formation–
Week-9	Planning Commission Guidelines
Week-10	Concept - methods of Appraisal- Need for financial Planning
Week-11	Source of finance- - Capital structure
Week-12	Capitalisation –venture capital – Export Finance
Week-13	Commercial Bank - IDBI - IFCI - ICICI
Week-14	UTI – SFCs – SIDCO - Exim Bank of India- Institutional Support to Entrepreneur

Week-15	NSIC- SIDO- SSIB- SSICS- SISI - District Industries Centre (DICs).
---------	--

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: M.A., ECONOMICS

SUBJECT CODE: 19PDECC2

SUBJECT NAME: PUBLIC FINANCE

SEMESTER NO: IV

STAFF NAME: DR.T.PONSUNMUGARAJA

WEEK	TOPICS TO BE COVERED
Week-1	Public Finance and its role in market economy - Principles of Public Finance: Maximum Social Advantage - Objectives -
Week-2	Test of Social Advantage - Musgrave and Mrs. Hicks Policy
Week-3	Functions of Public Finance - Theory of Social Goods - Theory of Optimal Distribution.
Week-4	Public Revenue - Principles and Theories
Week-5	Incidence of Public Revenue and Shifting of Taxation - Taxable Capacity
Week-6	Excess Burden and Efficiency Effects
Week-7	Individual Taxes - Union Taxes: Income Tax, Corporation Tax - Excise Duty, MODVAT - CENVAT- State Taxes
Week-8	Sales Tax, Agricultural Income Tax, Tax Evasion - Tax Reforms in India -
Week-9	Indirect Tax Reforms – Goods and Service Tax (GST).
Week-10	Public Debt - The Burden of Public Debt - Monetisation of Public Debt
Week-11	Management of Public Debt
Week-12	The Magnitude and Impact of Public Debt in India - Deficit Financing.
Week-13	Finance commission – Principles –Recommendations of 14th Finance Commission and Terms of Reference of the 15th Finance Commission
Week-14	Financial Autonomy in India – Tax Reform proposals of Kelkar Committee- Tax structure and Working of Fiscal federalism in India –
Week-15	Fiscal responsibilities of central and state- FRBM Act 2003- Central and State government Budgets – issues of fiscal deficit- Fiscal policy and Economic downturn: Fiscal correction versus additional Stimulus.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE: B.A. ECONOMICS
SUBJECT CODE: 22UAECC1
SUBJECT NAME: INDIAN ECONOMY
SEMESTER NO: II
STAFF NAME: DR.D.BALAJI

WEEK	TOPICS TO BE COVERED
Week-1	The concept of an economic system – economic systems – capitalism
Week-2	socialism- mixed economy – India as mixed economy
Week-3	salient characteristics of Indian economy – share of GDP from primary , secondary and tertiary sectors
Week-4	Overview of Indian economic development in colonial period
Week-5	agriculture – land tenure systems
Week-6	drain of resources by Britain - Indian economy at the time of Independence.
Week-7	The arguments for planning in the Indian context
Week-8	Five Year Plans – goals of Five Year Plans – growth
Week-9	modernization – self-reliance – equity – role of state – the role of Planning Commission
Week-10	Agricultural development - Land reforms – The Green Revolution – state policy for agricultural development
Week-11	performance of agricultural sector - Industrial development - role of public sector
Week-12	state policy for industrial development for cottage and small scale industrial units - industrial development of backward regions - performance of Industrial sector.
Week-13	Import substitution as India's trade strategy –consequences of import substitution – poverty in India
Week-14	definition of poverty – causes of poverty – policies for poverty reduction
Week-15	trickle-down vs. direct targeting – India's poverty alleviation strategy.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS**

**LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE: B.A. ECONOMICS

SUBJECT CODE: 19UCECC2

SUBJECT NAME: **MONETARY**

SEMESTER NO: IV

STAFF NAME: **DR.D.BALAJI**

WEEK	TOPICS TO BE COVERED
Week-1	Money – Evolution
Week-2	Functions and Classification of money
Week-3	Role of Money.
Week-4	Value of Money – The cash transactions approach –
Week-5	The cash balance approach – The Keynesian theory of money and prices
Week-6	Friedman;s Restatement quantity theory of money
Week-7	The supply and the demand for money – Determinants of money supply
Week-8	The post-Keynesian approaches of demand for money
Week-9	Tobin and Don Patinkin.
Week-10	Inflation – Meaning – Theories – Demand pull and cost push
Week-11	inflationary gap – The Philips curve – Deflation – Stagflation
Week-12	Trade Cycles – General features
Week-13	Monetary standards – Paper currency - Systems of note-issue
Week-14	old standard – Indian Currency System
Week-15	Development and Problems.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS**

**LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD)**

DEGREE: B.A.ECONOMICS

COURSE CODE: 19UFECC1

COURSE NAME: MACRO ECONOMICS-II

SEMESTER NO: VI

STAFF NAME: DR.D.BALAJI

WEEK	TOPICS TO BE COVERED
Week-1	Investment and Saving – money demand, money supply and the interest rate
Week-2	deriving the IS curve – shifting the IS curve
Week-3	deriving the LM curve – shifting the LM curve.
Week-4	Money - Functions of money – instruments of monetary policy
Week-5	money supply and money demand – the classical dichotomy
Week-6	Keynesian theory of money demand – IS-LM model and monetary policy.
Week-7	Instruments of fiscal policy – classical theory and fiscal policy –
Week-8	Keynesian theory and fiscal policy
Week-9	fiscal expansion
Week-10	IS-LM model and fiscal policy – critique of fiscal policy.
Week-11	Phases of business cycle – macroeconomic variables and business cycles
Week-12	classical theory and business cycles
Week-13	Keynesian theory of business cycles.
Week-14	Sources of growth – capital and growth – labour and growth
Week-15	technology and growth – total factor productivity.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS**

**LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD)**

DEGREE: M.A.ECONOMICS

COURSE CODE:22PBECC1

COURSE NAME: MONETARY ECONOMICS

SEMESTER NO: II

STAFF NAME: : DR.D.BALAJI

WEEK	TOPICS TO BE COVERED
Week-1	Quantity theories of money – Fisher and Cambridge- Keynesian monetary theory
Week-2	James Tobin’s portfolio analysis of money demand
Week-3	Don Patinkin’s Integration– Real Balance Effect- Milton Friedman’s reformulated quantity theory.
Week-4	Types and determinants of money supply
Week-5	money multiplier- Theories of interest rate – classical
Week-6	money multiplier- Theories of interest rate – classical
Week-7	Significance and functions of Money market and capital market-
Week-8	Role of financial intermediaries – Effects of financial intermediation
Week-9	Non-banking financial institutions – Gurley and Shaw theory.
Week-10	Functions of Commercial banks - Credit creation – process and limitations- Role of Commercial banks after nationalization
Week-11	after reforms- Role of RBI – Regulation of money supply and credit- Narashimham Committee Reports
Week-12	1991 and 1998- RaguramRajan Committee Report - 2007.
Week-13	Objectives and Instruments of Monetary policy
Week-14	Limitations of monetary policy- Monetarism and Keynesianism

Week-15	Comparison - Supply side policies
---------	-----------------------------------

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN)**

DEGREE: B.A. ECONOMICS

COURSE CODE: 22UBECA2

COURSE NAME: RURALECONOMICS

SEMESTER NO: II

STAFF NAME: DR.S.CHANDHIRAN

WEEK	TOPICS TO BE COVERED
Week-1	Nature- Scope and Factors determining Rural Economy- Characteristics of Rural Economy
Week-2	Social Aspects of India's Rural Areas - Barter System - Non-monetized Sector - Economic Characteristics
Week-3	Land and Asset Distribution - Agricultural Income - Vagaries of Monsoon.
Week-4	Rural Unemployment - Types and Magnitude , Agricultural Labour – Marginal Productivity – Agricultural Wage
Week-5	Minimum Wages Act, Rural Employment Programmes – MGNREGA – Rural Poverty
Week-6	Nature, Causes and Consequences – Poverty Alleviation Programmes.
Week-7	Agricultural Marketing – Minimum Support Price linked to Production Cost - Agriculture Marketing Development
Week-8	eNAM system (online Agriculture Market Place) Crop Insurance - Rural Finance - Causes and magnitude of rural indebtedness, Sources of rural credit: Unorganized:
Week-9	Money lenders, Indigenous Bankers, Organized: Co-operatives, Commercial Banks, Regional Rural Banks – NABARD.
Week-10	Rural Development Programmes – Pradhan Mantri SadakYojana – Pradhan Mantri Awaas Yojana
Week-11	National Rural Health Mission

Week-12	National Rural Health Mission
Week-13	Rural Industrialization - Agro-based Industries – Cottage Industries, Rural artisans - Cooperative societies
Week-14	Rural Marketing. Cooperative Marketing- Role of Self Help Groups – PURA Model
Week-15	Recent Government Policy for Rural Development.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039**

PG & RESEARCH DEPARTMENT OF ECONOMICS

LESSON PLAN

ACADEMIC YEAR- 2022-2023 (EVEN)

DEGREE: B.A. ECONOMICS

COURSE CODE: 19UCECC1

COURSE NAME MICRO ECONOMICS-1

SEMESTER NO: 5

STAFF NAME: DR.S.CHANDHIRAN

WEEK	TOPICS TO BE COVERED
Week-1	Definition of economics (scarcity definition only) – scope of microeconomics – units of analysis: consumers and firms
Week-2	benefits and costs- opportunity cost and accounting cost- marginality decision making
Week-3	rationality: self-interest (maximization of utility and profit) – the market mechanism and resource allocation.
Week-4	The concept of Demand – law of demand – the demand curve – change in demand and quantity demanded – determinants of demand
Week-5	elasticity of demand : types and determinants - Supply – law of supply – the supply curve
Week-6	determinants of supply – elasticity of supply : types and determinants.
Week-7	The concept of equilibrium – demand - supply interaction – price as outcome of demand-
Week-8	supply interaction - and market equilibrium
Week-9	desirability of equilibrium: consumer surplus and producer surplus
Week-10	The concept of utility – ordinal and cardinal utility –
Week-11	total and marginal utility – the law of diminishing marginal utility
Week-12	Law of equi-marginal utility.
Week-13	The indifference curves and maps – properties of indifference curves

Week-14	marginal rate of substitution - The budget line
Week-15	price and substitution effects - optimal consumer choice.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG & RESEARCH DEPARTMENT OF ECONOMICS**

**LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN)**

DEGREE: III.BA., ECONOMICS

COURSE CODE:19UEECC1

COURSE NAME: MACRO ECONOMICS

SEMESTER NO:V

STAFF NAME: DR.S.CHANDHIRAN

WEEK	TOPICS TO BE COVERED
Week-1	The scope of macroeconomics – GDP definition – Measuring GDP
Week-2	Expenditure approach- Income approach – value added approach-
Week-3	the concept of potential output- real and nominal GDP – GDP deflator - circular flow
Week-4	Introduction: Types of unemployment - aggregate demand and aggregate supply
Week-5	assumptions of classical theory – Say’s law – wage and price flexibility -
Week-6	employment and output determination in classical model
Week-7	Keynes’s critique of classical theory – Involuntary unemployment – effective demand
Week-8	components of effective demand - consumption - marginal propensity to consume
Week-9	multiplier - investment – marginal efficiency of capital – underemployment equilibrium.
Week-10	Definition of inflation – types of inflation- measuring price level – consumer price index – wholesale price index – producer price index
Week-11	headline and core inflation – quantity theory of money – inflation-
Week-12	unemployment trade-off: Philips curve - costs of inflation.
Week-13	Absolute income hypothesis – relative income hypothesis

Week-14	permanent income hypothesis
Week-15	life cycle hypothesis.

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (ODD semester – 2022 -23)

FIRST YEAR SEMESTER 1

NAME OF THE SUBJECT FOOD SCIENCE FACULTY INCHARGE Dr ANNA CHELLAPPA

	Topics to be Covered
Week -1	UNIT I:FOOD GROUPS AND METHODS OF COOKING a. Classification of food –Basic food groups- classification and functional foods, food plate
Week -2	b. Methods of cooking
Week -3	UNIT II:CEREAL AND CEREAL PRODUCTS Composition and nutritive value ,products of cereals and millets,
Week -4	. UNIT III:PROTEIN FOODS a Pulses - Nutritive value of pulses, effect of processing such as soaking and germination, toxic factors present in pulses. FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	b. Milk and Milk products -Composition and nutritive value of milks,
Week -6	types and uses of milk and milk products-,
Week -7	non fermented- skim milk, khoa, standardized milk, ultrahigh temperature processed milk, cream -fermented- butter, cheese, curd
Week -8	. Eggs - Structure, composition and nutritive value, uses of egg in cookery SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	Flesh foods -Composition and nutritive value of meat and fish, selection of fish, post mortem changes in meat, ageing of meat
Week -10	UNIT IV: VEGETABLES AND FRUITS AND . Vegetables - Classification, composition, nutritive value and pigments –water insoluble and water soluble. b. Fruits -
Week -11	Classification, composition, nutritive value, ripening and browning-enzymatic and non-enzymatic
Week -12	UNIT V:FATS, SUGARS, OILS, BEVERAGES AND SPICE Fats and Oil -Types, role in cooking, hydrogenation, winterization and rancidity of fats.
Week -13	b. Sugar -Products, stages of sugar cookery and role of sugar in cooking.
Week -14	c. Beverages -Classification and uses in cookery. d. Spices - Uses in cookery.
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (ODD semester – 2022 -23)

FIRST YEAR SEMESTER 1

NAME OF THE SUBJECT FOOD PRESERVATION FACULTY INCHARGE Dr LALITHA A

	Topics to be Covered
Week -1	Food Spoilage - Definition, causes, micro organisms involved in spoilage of bread, fruits and vegetables, meat, fish, egg, milk, juices and pickles.
Week -2	Food preservation - Definition, principles and importance, classification – bactericidal and bacteriostatic methods.
Week -3	UNIT- II Processing and preservation by high temperature: blanching,
Week -4	. pasteurization, sterilization and UHT processing, canning, extraction cooking, . FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	dielectric heating microwave heating, baking, roasting and frying. Retort processing of Ready To Eat (RTE) products. Drying & Dehydration.
Week -6	UNIT-III Processing and preservations by low temperature – refrigeration, freezing, dehydro freezing
Week -7	Food irradiation
Week -8	Processing and preservation by drying, concentration and evaporation SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	: various methods sun – drying, tray or tunnel drying,.
Week -10	spray drying, drum drying freeze drying, fluidized bed drying. Advantages and disadvantages
Week -11	UNIT-V Processing and preservation by non – thermal methods:
Week -12	Use and application of enzymes and microorganism in processing and
Week -13	preservation by salt, sugar, chemicals smoking.
Week -14	Food additives: Definition, types and functions, permissible limits and safety aspects.
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (ODD semester – 2022 -23)

FIRST YEAR SEMESTER 1

NAME OF THE SUBJECT HEALTH AND PHYSICAL FITNESS FACULTY INCHARGE Dr ANNA CHELLAPPA

	Topics to be Covered
Week -1	Unit I : Health and physical activity – Definition of health
Week -2	, physical activity and physical fitness and balanced diet
Week -3	Unit II : Energy usage and its balance
Week -4	. Foods supplying energy, proximate principles and energy utilization FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	Unit III : Exercise and Energy
Week -6	Types of exercise – Aerobic and anaerobic, energy usage during exercise
Week -7	. Unit IV : Energy imbalance – Obesity – definition, causes, types, assessment and
Week -8	Complications of obesity. SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	Unit – V Benefits of physical activity- Importance of physical activity,
Week -10	Practical = 3 day food recall and discussion
Week -11	Practical daily activity assessment
Week -12	Practical – Anthropometric measurements
Week -13	Preparing charts on food pyramid
Week -14	Positive lifestyle modification
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (ODD semester – 2022 -23)

SECOND YEAR YEAR SEMESTER 111

NAME OF THE SUBJECT HUMAN DEVELOPMENT FACULTY INCHARGE Dr ANNA CHELLAPPA

DR Y VIJAYALAKSHMI PRIYA

	Topics to be Covered
Week -1	UNIT - IIntroduction to Human Development: Definition,
Week -2	Stages of Human Development. Principles of growth and development
Week -3	UNIT - IIPrenatal Development and Post natal Care: Birth and the Neonate (newborn)-. Conception – signs and symptoms of pregnancy, prenatal development – stages of development, factors affecting development,.
Week -4	. Birth process – signs of labour, stages, birth injuries, postnatal care – adjustment of the newborn FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	UNIT - IIIInfancy : Development during infancy – Physical, social, emotional,
Week -6	Cognitive and language.
Week -7	Infant care and hygiene – Breast feeding, weaning, complementary feeding, immunization Schedule, habit formation. Minor ailments and preventive measures Need for children Physiological and psychological. Role of Child care centres
Week -8	Early and Late Childhood : Physical, motor, emotional, language, moral, social and intellectual development.. Habit formation. Behavior problems – causes, prevention and treatment. . SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	. Preschool education – importance, objectives, programmes. Play – definition, types, characteristics and play hazards
Week -10	. UNIT - IVAdolescence – definition, physical, emotional, intellectual and motor development, personal adjustment and maladjustment
Week -11	, Delinquency – causes, prevention and rehabilitation. Role of Parents and Society
Week -12	Factors influencing Personality Development
Week -13	Drug addiction and alcoholism – rehabilitation
Week -14	Unit - V Adulthood – characteristics and developmental tasks.
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (ODD semester – 2022 -23)

SECOND YEAR SEMESTER 111

NAME OF THE SUBJECT HUMAN PHYSIOLOGY FACULTY INCHARGE Dr LALITHA A , Ms.

	Topics to be Covered
Week -1	UNIT I CELL AND TISSUES - Structure of Cell and functions of different of different organelles.
Week -2	Classification, structure and functions of tissues.
Week -3	BLOOD- Constituents of blood- RBC, WBC and Platelets and its functions. Erythropoiesis, Blood clotting, Different Blood groups.
Week -4	. 2) UNIT II NERVOUS SYSTEM General anatomy of nervous system, functions of the different part FIRST CONTINUOUS ASSESSMENT TEST
Week -5	3) UNIT III HEART AND CIRCULATION Anatomy of the heart and blood vessels, properties of cardiac muscle, origin and conduction of heart beat, cardiac cycle, cardiac output,
Week -6	blood pressure - definition and factors affecting blood pressure, and description of ECG.
Week -7	RESPIRATORY SYSTEM Anatomy and physiology of respiratory organs
Week -8	Gaseous exchange in the lungs, mechanism of respiration. SECOND CONTINUOUS ASSESSMENT TEST
Week -9	UNIT IV DIGESTIVE SYSTEM Anatomy of Gastro-intestinal tract,
Week -10	Structure and functions of Liver and Pancreas
Week -11	Digestion and absorption of carbohydrates, proteins and fats.
Week -12	EXCRETORY SYSTEM Structure of kidney, functions of Nephron
Week -13	UNIT V ENDOCRINE SYSTEM Functions of hormones secreted by Pancreas, Pituitary gland, thyroid, parathyroid and adrenal glands. Effects of hypo and hypersecretion of these glands.
Week -14	REPRODUCTIVE SYSTEM Anatomy of male and female reproductive organs, Ovarian and Uterine cycle, influence of hormones on pregnancy and lactation
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (ODD semester – 2022 -23)

SECOND YEAR SEMESTER 111

NAME OF THE SUBJECT HUMAN NUTRITION

FACULTY INCHARGE Dr LALITHA A

	Topics to be Covered
Week -1	UNIT I INTRODUCTION TO NUTRITION History of Nutrition – Development of Nutrition as a Science
Week -2	Food as a source of nutrients, definition of nutrients, dietary guidelines for good nutrition
Week -3	Signs and symptoms of adequate, optimum and good nutrition, malnutrition (Under nutrition, and over nutrition).
Week -4	WATER As a nutrient, functions, sources, requirements. Distribution of water in the body, Water balance FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	UNIT II CARBOHYDRATES Classification, Sources, Requirements and Functions of carbohydrates in the body
Week -6	Digestion, absorption and metabolism. Hormonal control of Blood sugar
Week -7	Dietary fibre- Definition, soluble and insoluble fibres, sources of fibre Role of fibre in human nutrition PROTEINS Amino acids -. Classification, Sources, Requirements and functions of protein. Mutual supplementation of proteins
Week -8	.Protein deficiency-Protein Energy Malnutrition- Kwashiorkor and Marasmus – etiology, clinical features, treatment and prevention Evaluation of protein quality- PER, BV, NPU and NPR, chemical score. SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	UNIT III LIPIDS Classification, Sources, Requirements and functions, Essential fatty acids- deficiency, food sources and functions, dietary lipids and its relation to Cardiovascular diseases. ENERGY Units of Energy -Kilocalories, Kilojoules, Conversion of KJ to Kcal, determination of energy value of foods using Bomb calorimeter, , gross calorific values. Physiological energy, value of foods, relation between oxygen used and calorific value.
Week -10	Basal metabolism, factors affecting BMR - Determination of energy requirements, Direct and Indirect calorimetry direct calorimetry. Relation between Respiratory quotient and energy output Specific dynamic action of food (Thermogenic food in REE), Benedict Roth basal Metabolism Apparatus, determination of energy metabolism, during work-energy requirements for various types of activities, energy, calculation of energy value of foods, Energy requirements for different age groups
Week -11	UNIT IV FAT SOLUBLE VITAMINS

	Metabolism, Functions, effects of deficiency, food sources, requirements, unit of measurements and hypervitaminosis of vitamins A, D, E and K.
Week -12	WATER SOLUBLE VITAMINS Ascorbic acid and B Complex vitamins- Thiamine, Riboflavin and Niacin- Functions, effects of deficiency, food sources and requirements for different age groups. Importance of folic acid, Pyridoxine, Vitamin B12, Biotin and Pantothenic acid to the body.
Week -13	UNIT V MACRO MINERALS- Calcium, Phosphorous, Magnesium, Potassium, Sodium and Chloride- Distribution in the body; functions, effects of deficiency, food sources and RDA.
Week -14	MICRO / TRACE MINERALS in human nutrition - Iron, Zinc, Iodine, Selenium, Manganese, Chromium, Fluoride and Copper Distribution in the body; functions, effects of deficiency, food sources and requirements for different age groups
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (ODD semester – 2022-23)

THIRD YEAR SEMESTER V

NAME OF THE SUBJECT THERAPEUTIC DIETETICS FACULTY INCHARGE Dr Y VIJAYALAKSHMI PRIYA

	Topics to be Covered
Week -1	UNIT: I Concept of diet therapy: principle of therapeutic diets, modification of normal diet, classification of therapeutic diets. Different feeding techniques –enteral and parenteral feeding. Role of dieticians in nutritional care.
Week -2	UNIT: II Conditions/Disease of GI Tract- dietary modifications Diarrhoea, dysentery and constipation
Week -3	Peptic ulcer, Irritable bowel syndrome & inflammatory bowel disease (ulcerative colitis)
Week -4	UNIT: III Causes, symptoms, dietary management of a) Disease of liver & Gall bladder- Hepatitis, cirrhosis, gall stones b) – Acute & Chronic (Typhoid, influenza,). FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	Febrile conditions= malaria, tuberculosis
Week -6	UNIT: IV Life style disorders/diseases – causes, symptoms and
Week -7	dietary management-Obesity
Week -8	Diabetes mellitus SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	Diabetes mellitus
Week -10	Cardio vascular diseases – hypertension
Week -11	Atherosclerosis
Week -12	UNIT V Diseases of excretory system– nephritis, nephritic syndrome
Week -13	Urinary calculi, renal failure.
Week -14	Cancer – Dietary management
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (ODD semester – 2022 -21\4)

THIRD YEAR SEMESTER V

NAME OF THE SUBJECT **QUANTITY FOOD PRODUCTION AND SERVICE**

FACULTY INCHARGE **Dr ANNA CHELLAPPA**

	Topics to be Covered
Week -1	Unit I:FOOD SERVICE FACILITIES Designing food facilities - Basic units in plan design - Work centers, section and layout, flow of work.
Week -2	Types of Kitchens – U shaped, L shaped, Rectangular, Square shaped and Straight line
Week -3	Unit II:EQUIPMENT Classification - According to weight / size, order of use and mode of operation.
Week -4	Factors influencing selection of equipment, Purchasing – Purchasing procedure – Methods of buying FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	Unit III:QUANTITY FOOD PRODUCTION Menu planning - Advantages and factors affecting menu planning.
Week -6	Types of menu - French classical menu,
Week -7	A la Carte and Table d' hote menu - Advantages and disadvantages
Week -8	Quantity cookery – Standardization, Portion control, Stepping up of SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	Unit IV: STYLES OF SERVICE AND TABLE SETTING Styles of service –Waiter service - banquet, restaurant and room service.
Week -10	Self service- Buffet and cafeteria. Vending.
Week -11	Table - Rules for setting a table and cover
Week -12	SANITATION AND SAFETY. Maintaining a clean environment - Structural features - Drainage, water supply, electricity, lighting and ventilation - Waste Disposal and Pest control
Week -13	Hygiene in food handling - Receiving, storage and production, personnel Hygiene, Implementation
Week -14	HACCP in Food Service

Week -15	MODEL EXAM
----------	-------------------

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (ODD semester – 2022 -23)

THIRD YEAR SEMESTER V

NAME OF THE SUBJECT SPORTS NUTRITION FACULTY INCHARGE Dr LALITHA .A

	Topics to be Covered
Week -1	UNIT I: PHYSICAL ACTIVITY Definition – Physical activity, Exercise, Fitness, Physical activity pyramid. Benefits of physical activity. Types of exercise – Aerobic, Anaerobic, Stamina building, Resistance training, Flexibility and Endurance. Effect of exercise on muscles and cardiopulmonary system.
Week -2	UNIT II: CARBOHYDRATE, PROTEIN AND FAT Carbohydrate, Protein as a source of fuel before, during and after competition
Week -3	Fat as a source of fuel before, during and after competition
Week -4	glycogen loading FIRST CONTINUOUS ASSESSMENT TEST
Week -5	Unit III: VITAMINS AND MINERALS: Effect of exercise on vitamin and mineral requirements
Week -6	Female athlete triad
Week -7	Unit IV: Water and Ergogenic Aids Role of water in pre, during and post event meal. Dehydration – causes and effects.
Week -8	Nutritional Ergogenic aids SECOND CONTINUOUS ASSESSMENT TEST
Week -9	Unit V: Energy System Creatine Phosphate energy system, Anaerobic and Aerobic Pathway
Week -10	Practical – plan and prepare sample sports breakfast bars
Week -11	Practical – plan and prepare sample sports energy boosting drinks
Week -12	Practical – plan and prepare sample sports breakfast bars
Week -13	Practical – plan and prepare sample sports pre-event meal
Week -14	Practical plan and prepare sample sports post event meal
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (ODD semester – 2022 -23)

THIRD YEAR SEMESTER V

NAME OF THE SUBJECT : TEXTILE SCIENCE FACULTY INCHARGE Dr LALITHA A

	Topics to be Covered
Week -1	Unit I : TEXTILES FIBRES Classification, general properties, use and care of the following fibres Cellulose fibres – Cotton and
Week -2	Protein fibres – Wool and Silk.
Week -3	Thermoplastic fibres - Nylon and polyester
Week -4	. Unit II: YARN CONSTRUCTION Yarn spinning – Mechanical and chemical, conventional and non- conventional, wet, dry and melt spinning. Yarns- Classification based on numbering and twisting. FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	a. Types of yarns- Simple, Complex yarns
Week -6	Unit III: FABRIC CONSTRUCTION a. Weaving-Parts of simple loom and weaving step
Week -7	b. Types of weaves- Basic weaves
Week -8	Unit IV: FABRIC FINISHING a. Basic finishes- Bleaching, tentering, singeing, sizing, mercerizing SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	Special finishes- Calendaring, napping, flocking, water repellency, sanforising, wrinkle resistance and fire retardant.
Week -10	Unit V: SURFACE DESIGNING a. Dyes- Classification and different methods of dyeing
Week -11	Simple test to detect fibers
Week -12	Preparing weaves using colored paper
Week -13	a. Methods of printing- Hand printing- Block, Stencil, batik, tie and dye
Week -14	Machine printing- Roller printing, screen printing
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (ODD semester – 2022 -23)

THIRD YEAR SEMESTER V

NAME OF THE SUBJECT CLINICAL NUTRITION FACULTY INCHARGE Ms Ranjitha and ms Lavanya *(PTA faculty)

	Topics to be Covered
Week -1	. Unit I Metabolism Review of digestion and absorption of proximate principles Carbohydrate - Glucose transport. glycolysis. metabolism of lactate and pyruvate. citric acid cycle.
Week -2	gluconeogenesis. pentose phosphate pathway. Amino acid - Intermediary metabolism and urea cycle
Week -3	Lipid - Intestinal resynthesis of TG, transport, oxidation of fatty acids, biosynthesis of cholesterol
Week -4	. Unit II Genetic control of metabolism Nucleic acids, DNA replication, RNA – Synthesis, types and functions, Genetic code, protein biosynthesis, Recombinant DNA Technology FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	Unit III Biochemical changes due to disorders of metabolism Diabetes mellitus,
Week -6	Inborn errors of metabolism with respect to lactose, galactose, phenyl alanine and uric acid
Week -7	(Gout) Unit IV Digestive System a. Diarrhoea, constipation. Gastritis, ulcers, colitis, malabsorption syndrome –Nutritional implications SECOND CONTINUOUS ASSESSEMENT TEST
Week -8	Metabolic and nutritional implications of Hepatitis
Week -9	Hepatic coma
Week -10	.Cirrhosis of liver.
Week -11	Pancreatitis. Cholecystitis and Cholelithiasis
Week -12	Unit V Renal System a. Metabolic and nutritional implications of Nephritis. Nephrotic syndrome. Renal failure
Week -13	Renal calculi and Dialysis
Week -14	. Water and electrolyte losses and replenishment. Effects of dehydration and water intoxication.
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan EVEN semester – 2022 -23)

FIRST YEAR SEMESTER 11

NAME OF THE SUBJECT NUTRITION THROUGH LIFE CYCLE **FACULTY INCHARGE** Dr ANNA CHELLAPPA

	Topics to be Covered
Week -1	Unit-I Principles of meal planning- Food groups and food exchange list; Factors affecting meal planning Methods of assessment of nutrient requirements; Dietary guidelines for Indians.
Week -2	Nutrition for adulthood- Food and nutrient requirements for adult man and woman, RDA, nutritional guidelines,
Week -3	Unit-II Nutrition during pregnancy- Physiological changes in pregnancy, RDA, nutritional guidelines, nutritional needs, effect of nutritional status on pregnancy outcome, optimal weight gain and its components, nutrition related problems in pregnancy and ways to control them, complications in pregnancy.
Week -4	. Nutrition during lactation- Physiology of lactation, RDA and nutritional needs of a nursing mother, nutritional guidelines, FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	composition of breast milk and advantages, disadvantages of bottle feeding
Week -6	Unit-III Nutrition during infancy- Growth and development, food and nutrient requirements, breast feeding and weaning.
Week -7	Nutrition for preschool children- Growth and development, food and nutrient requirements, eating habits and behavior.
Week -8	Unit-IV Nutrition for school children- Growth pattern, food and nutrient requirement, healthy food habits, school lunch programs. SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	Nutrition during adolescence- Changes in growth pattern, food and nutrient requirements, , changes in food habits, eating disorders.
Week -10	Unit-V Nutrition for old age- Physiological changes in elderly, food and nutrient requirements, nutritional and health concerns in old age and their management,.
Week -11	Planning low cost balanced diet for pregnant and lactation women
Week -12	Planning low cost balanced diet for adolescents and school going children
Week -13	Planning low cost balanced diet for preschool children
Week -14	Preparation of weaning foods
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (EVEN semester – 2022 -23)

FIRST YEAR SEMESTER 11

NAME OF THE SUBJECT NUTRITION THROUGH LIFE CYCLE PRACTICAL

FACULTY IN CHARGE Dr ANAN CHELLAP Dr.Y VIJAYALAKSHMI PRIYA

	Topics to be Covered
Week -1	Planning a balanced diet for an adult man and woman during different physical activities - sedentary, moderate, heavy worker. Preparation of above diet
Week -2	Planning a balanced diet for an adult man and woman during different physical activities - sedentary, moderate, heavy worker. Preparation of above diet
Week -3	Planning and preparation of a balanced diet for a lactating mother – Nutrient requirements, menu planning and preparation of a balanced diet of lactating mothers
Week -4	Planning and preparation of a balanced diet for a lactating mother – Nutrient requirements, menu planning and preparation of a balanced diet of lactating mothers FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	Planning and preparation of a balanced diet for a lactating mother – Nutrient requirements, menu planning and preparation of a balanced diet of lactating mothers
Week -6	Weaning foods
Week -7	Nutrition during infancy – nutritional requirements during infancy, Supplementary feeding- preparation of weaning foods
Week -8	Nutrition during infancy – nutritional requirements during infancy, Supplementary feeding- preparation of weaning foods SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	Planning and preparation of diet for pre- school children – Nutrient requirements, menu planning and preparation of a balanced diet for pre-school children .
Week -10	Nutrition during school age –Nutrient requirements, menu planning and preparation of a balanced diet for school aged children , planning and preparation of a nutritious packed lunch
Week -11	Nutrition during adolescence –Nutrient requirements, menu planning and preparation of a balanced diet for adolescents .
Week -12	Nutrition during adolescence –Nutrient requirements, menu planning and preparation of a balanced diet for adolescents .
Week -13	Planning a diet for a senior citizen – Nutrient requirements, menu planning and preparation of a balanced diet for senior citizens

Week -14	Planning a diet for a senior citizen – Nutrient requirements, menu planning and preparation of a balanced diet for senior citizens
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (EVEN semester – 2022 -23)

FIRST YEAR SEMESTER 11

NAME OF THE SUBJECT FOOD SAFETY AND HYGIENE

FACULTY INCHARGE Dr LALITHA A

	Topics to be Covered
Week -1	Unit I :Environmental Hygiene: Site, structure, ventilation, lighting, water supply and waste disposal.
Week -2	Unit I Environmental Hygiene: Site, structure, ventilation, lighting,
Week -3	Unit I :Environmental Hygiene: Site, structure, water supply and waste disposal.
Week -4	.Unit II :Safe food handling: Safety in food procurement, storage, handling and preparation.HACCP FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	Unit II Safe food handling: Safety in food procurement, storage, handling and preparation.HACCP
Week -6	Unit II :Safe food handling: Safety in food procurement, storage, handling and preparation.HACCP
Week -7	Unit III :Cleaning of equipment and premises: Usage of detergents and sanitizers.
Week -8	Unit III :Cleaning of equipment and premises: Usage of detergents and sanitizers. SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	Unit III Cleaning of equipment and premises: Usage of detergents and sanitizers
Week -10	Unit IV :Personal hygiene: Importance of personal hygiene for food handlers
Week -11	Unit IV :Personal hygiene: Importance of personal hygiene for food handlers
Week -12	Unit IV :Personal hygiene: Importance of personal hygiene for food handlers
Week -13	Unit V:Food safety education: objectives, teaching methods, training..
Week -14	Unit V:Food safety education: objectives, teaching methods, training.
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (EVEN semester – 2022 -22)

SECOND YEAR SEMESTER IV

NAME OF THE SUBJECT INTERIOR DESIGN

FACULTY INCHARGE Dr Lalitha . A

	Topics to be Covered
Week -1	UNIT I Design – elements of design – line, shape, size, space, texture, pattern, colour and light, .
Week -2	Types and characteristics of design
Week -3	Principles of design – Harmony, Balance, Rhythm, proportion, Emphasis
Week -4	.UNIT II-COLOR Qualities of colour – Hue, Value, and intensity, colour harmony, developing color schemes For different rooms. FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	Prangscour chart, Psychological colour chart
Week -6	UNIT III FURNITURE AND FURNISHINGS Selection and arrangement of furniture in different rooms. Different types of furnishing materials – factors considered in their selection.
Week -7	Floor coverings, Curtains and Draperies,
Week -8	Window treatment .SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	.UNIT IV- Accessories – selection,
Week -10	Use and care of accessories,
Week -11	Types- traditional and modern – art objects – picture
Week -12	Types, use and care- flower arrangement for different rooms. Indoor plants- use and care.
Week -13	UNIT V -LIGHTING Lighting – importance of lighting – principles and types of Lighting – Lighting needs for various activities.
Week -14	UNIT V -LIGHTING Lighting – importance of lighting – principles and types of Lighting – Lighting needs for various activities.
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (even semester – 2022 -23)

SECOND YEAR SEMESTER 1V

**NAME OF THE SUBJECT HUMAN NUTRITION PRACTICAL FACULTY INCHARGE Dr LALITHA A , Ms
Ranjitha Devi**

	Topics to be Covered
Week -1	Qualitative tests- a. For sugars: Glucose, fructose, lactose, maltose and sucrose. b. For minerals-iron,calcium,phosphorous and sulphur.
Week -2	Quantitative estimation of reducing sugar.
Week -3	Quantitative estimation of vitamin C.-lime juice
Week -4	.Quantitative estimation of vitamin C.-lime juice FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	. For protein- albumin
Week -6	Quantitative estimation of calcium.
Week -7	Quantitative estimation of calcium.
Week -8	SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	Quantitative estimation of phosphorus
Week -10	Quantitative estimation of phosphorus.
Week -11	Quantitative estimation of phosphorus.
Week -12	Quantitative estimation of iron.
Week -13	Quantitative estimation of iron
Week -14	1. Quantitative estimation of iron
Week -15	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (EVEN semester – 2022 -24)

SECOND YEAR SEMESTER 1V

NAME OF THE SUBJECT BIOCHEMISTRY FACULTY INCHARGE Dr LALITHA A , Ms Ranjitha R

	Topics to be Covered
Week -1	UNIT I INTRODUCTION TO BIOCHEMISTRY Definition and relation to nutrition, Enzyme classification, Nomenclature,
Week -2	Factors affecting enzymatic activity, Mechanism of action. Co- enzyme and prosthetic group- role of B vitamins.
Week -3	UNIT II CARBOHYDRATE – Structure, General reactions of mono, di, tri and oligosaccharides, interconversion of sugars, Metabolism of carbohydrate -glucose oxidation through Glycolysis, Krebs-TCA cycle, Pentose Phosphate Pathway, Gluconeogenesis.
Week -4	Inborn errors of metabolism - Fructosuria and galactosemia- in brief FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	UNIT III AMINO ACIDS – classification, chemical properties due to amino and carboxyl groups. Chromatographic separation. Proteins-primary, secondary, tertiary structure of proteins,
Week -6	Hydrolysis of proteins-Denaturation, precipitation, coagulation. Nutritional classification of proteins
Week -7	General pathways of metabolism of amino acids-Deamination, transamination, decarboxylation – urea cycle, fate of carbon skeleton of amino acids. Inborn errors of metabolism-Phenyl ketonuria, Alcaptonuria, Maple Syrup Urine Disorder
Week -8	UNIT IV LIPIDS AND LIPID METABOLISM – Classification of fats, β oxidation of fatty acids, Bio synthesis of fatty acids, ketogenesis. SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	Nutritional importance of Saturated and Unsaturated fatty acids, Triacylglycerols, Phospholipids and Cholesterol
Week -10	Nutritional importance of Saturated and Unsaturated fatty acids, Triacylglycerols, Phospholipids and Cholesterol
Week -11	UNIT V Nucleic acids- Structure and Functions Inter relationship between carbohydrate, fat and protein metabolism – Hormonal regulation of metabolism.
Week -12	UNIT VI Inter relationship between carbohydrate, fat and protein metabolism – Hormonal regulation of metabolism.
Week -13	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (EVEN semester – 2022 -23)

THIRD YEAR SEMESTER VI

NAME OF THE SUBJECT **FOOD SERVICE MANAGEMENT** FACULTY INCHARGE **Dr Y VIJAYALAKSHMI PRIYA**

	Topics to be Covered
Week -1	ORIGIN OF HOTEL INDUSTRY History of hotel industry..
Week -2	Different types of catering establishments - Commercial and non commercial
Week -3	Unit II :ORGANISATION AND MANAGEMENT Principle and functions of management
Week -4	. Tools of management ,communication –types and barriers ,leadership quality and styles of leadership FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	Unit III : PERSONNEL MANAGEMENT Recruitment and selection - Sources of recruitment. steps involved in selection. Training – Importance and methods of training. .
Week -6	Performance appraisal - Promotion and dismissal of employees.
Week -7	UNIT IV : FINANCIAL management a. Elements of cost, cost control and pricing.
Week -8	Principles of double entry book keeping, books of account, SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	.Journal ,trial balance, profit and loss account,balance sheet
Week -10	Unit V : LAWS GOVERNING FOOD SERVICE ESTABLISHMENTS Labour laws related to employee – industrial dispute Act,
Week -11	factories Act, minimum wages Act, shops and establishments Act.

Week -12	Food laws – sale of goods Act, agricultural produce Act, prevention of food adulteration Act
Week -13	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (even semester – 2022 -23)

Third YEAR SEMESTER VI

NAME OF THE SUBJECT COMMUNITY NUTRITION FACULTY INCHARGE Ms Ranjitha(PTA faculty)

	Topics to be Covered
Week -1	Unit-I Concept and scope of public nutrition –Definition, concept, scope and multidisciplinary nature of public nutrition.
Week -2	Nutritional problems affecting the community- Etiology, prevalence, clinical features and preventive strategies for malnutrition related problem and deficiency disorders- Protein energy malnutrition, Obesity, Nutritional anemia, Vitamin A deficiency, Iodine deficiency disorders, Fluorosis
Week -3	Unit-II Assessment of nutritional status- Objectives and importance, Methods of assessment: Direct (Clinical signs, nutritional anthropometry,
Week -4	. biochemical tests, biophysical tests); Indirect (Diet surveys, vital statistics). FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	Unit-III Nutrition education- Objectives, principles and scope of nutrition and health education and promotion
Week -6	Unit-III Nutrition education- Objectives, principles and scope of nutrition and health education and promotion.
Week -7	Unit-IV Nutrition policy and programs- National nutritional policy; Integrated child development scheme (ICDS), Midday disorders.
Week -8	Meal Program, National programs for the prevention of anemia,
Week -9	Vitamin A deficiency, Iodine deficiency SECOND CONTINUOUS ASSESSEMENT TEST
Week -10	Unit-V National and International agencies in combating malnutrition- International: WHO, FAO, UNICEF; National: FSSAI, ICAR, ICMR, NIN, FNB, CFTRI, NNMB.
Week -11	Unit-V National and International agencies in combating malnutrition- International: WHO, FAO, UNICEF; National: FSSAI, ICAR, ICMR, NIN, FNB, CFTRI, NNMB.
Week -12	Preparing charts for community Nutrition

Week -13	MODEL EXAM
----------	-------------------

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (EVEN semester – 2022 -23)

THIRD YEAR SEMESTER VI

NAME OF THE SUBJECT THERAPEUTIC DIETETICS PRACTICAL FACULTY INCHARGE Dr
ANNA RANGINI CHELLAPPA Dr Y VIJAYALAKSHMI PRIYA

	Topics to be Covered
Week -1	Tube feeds Fevers – Typhoid and Tuberculosis
Week -2	Peptic Ulcer
Week -3	Diarrhoea and constipation
Week -4	Viral hepatitis FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	Cirrhosis of liver
Week -6	Obesity
Week -7	Diabetes Mellitus
Week -8	SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	Hypertension
Week -10	Atherosclerosis
Week -11	Chronic kidney disease
Week -12	Chronic kidney disease
Week -13	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (EVEN semester – 2020 -23)

THIRD YEAR SEMESTER V

NAME OF THE SUBJECT FAMILY RESOURCE MANAGEMENT FACULTY INCHARGE Dr
LALITHA A

	Topics to be Covered
Week -1	Unit – I Management – Definition, Principles and elements involved in management, Process – planning, controlling and evaluation.
Week -2	
Week -3	Motivation in management.(Introduction to values, goals and standards
Week -4	. Unit – II Management Concepts - Goals and Values – their relationship to decision-making Standard of Living – Definition, constituents – Means for raising the standard of living of families FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	Unit – III Decision Making – steps, importance, types of decisions, Individual and group decisions, resolving conflicts in group decisions
Week -6	Resources – Human and non-human resources
Week -7	.Characteristics of Resources
Week -8	Unit – IV Family - Concept, Role, stages of family life cycle SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	.Time Management – Time Demands during different stages of the family life cycle, Factors to be consider in making time and activities plans. Energy Management – Work simplification Definition, techniques and Mundel’s classes of changes
Week -10	Fatigue – Concept, types – Physiological and psychological fatigue. Unit – V Family Income – Definition, Types - Money, Real and Psychic income, various ways of improving the income of the family, Family finance management, family Budget – Definition and meaning, importance of budgeting, steps, factors affecting the budget. Engles’s Law of Consumption. Savings – Meaning, objectives, Needs for savings in the family, types of savings institutions and schemes
Week -11	Consumer – meaning and definition of consumer, consumer rights
Week -12	Problems faced by the consumer.
Week -13	MODEL EXAM

DEPARTMENT HOME SCIENCE – NUTRITION FOOD SERVICE MANAGEMENT AND DIETETICS

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in HOME SCIENCE

Teaching plan (even semester – 2022 -213

THIRD YEAR SEMESTER VI

NAME OF THE SUBJECT – DIET COUNSELLING FACULTY INCHARGE Dr Y.Viyayalakshmi Priya

	Topics to be Covered
Week -1	UNIT I: Role of a dietitian in a hospital and community,
Week -2	team approach to nutritional care, ethical code and responsibility.
Week -3	Defining features of counselling psychology.
Week -4	UNIT II: Diet counseling skill: Tactics and techniques of counseling-, , utilizing FIRST CONTINUOUS ASSESSEMENT TEST
Week -5	evaluating and understanding the clients attitude
Week -6	how to identify and express your feelings towards the client
Week -7	Proper counselling techniques- non verbal behavior, verbal behavior, covert behavior
Week -8	UNIT III: Concepts and principles in communication and their application in developing skills in counseling. SECOND CONTINUOUS ASSESSEMENT TEST
Week -9	Use of communication aids, communication and interviewing skills.
Week -10	UNIT IV: Therapeutic relationships: psychology of feeding the patients-
Week -11	Assessment of needs, education of the patient and follow up and establishing rapport with the patient and the family member,
Week -12	Diagnosis and assessment :Eliciting clinical information- medical history, assessment of diet profile, techniques of obtaining relevant information; dietary diagnosis- 24 hour recall method, food diary, list of food likes and dislikes, lifestyle; interpreting clinical information, case study assessment and evaluation.
Week -13	MODEL EXAM

Dr. AMBEDKAR GOVT. ARTS COLLEGE(AUTONOMOUS), CHENNAI-39

PG & RESEARCH DEPARTMENT OF MATHEMATICS

B.Sc. MATHEMATICS DEGREE PROGRAMME

TEACHING PLAN

ACADEMIC YEAR 2022-23 (ODD SEMESTER)

Subject Name : CLASSICAL ALGEBRA AND NUMBER THEORY

Subject Code : 22UAMAC1

Semester : I

Staff in Charge : Dr. O.S. Babu

Week – 1:	Unit I: Matrices: Symmetric, skew symmetric, Hermitian, Skew Hermitian
Week – 2:	Orthogonal and unitary matrices. Cayley- Hamilton theorem (Without proof)
Week – 3:	Eigen values, Eigen vectors.
Week – 4:	Unit II: Theory of equations: Formation of equations - Polynomial equations imaginary and irrational roots
Week – 5:	Relations between roots and coefficients
Week – 6:	symmetric functions of roots in terms of coefficients. Internal Assessment Test 1
Week – 7:	Unit III: Reciprocal equations:
Week – 8:	Transformation of equations – multiplication of roots, diminishing the roots
Week – 9:	Descartes rule of signs - Approximate solution of roots by Horner's method.
Week – 10:	Unit IV : Theory of numbers: Divisibility of integers – Division Algorithm – GCD – Euclidian algorithm
Week – 11:	Prime numbers – composite numbers – fundamental theorem of arithmetic (without proof) – divisors of a positive integer N Internal Assessment Test 2
Week – 12:	Unit V: Theory of numbers (continued...): Euler's function $\phi(N)$ – formula for $\phi(N)$ (without proof)
Week – 13:	Highest power of prime p contained in $n!$.
Week – 14:	Revision
Week – 15:	Model Exam

Subject Name : CALCULUS
 Subject Code : 22UAMAC2
 Semester : I
 Staff in Charge : Mr. K. Saravanan

Week	Topics to be Covered
Week-1	<u>Unit-1:</u> Differential Calculus – n^{th} derivatives –simple problems.
Week-2	<u>Unit-1:</u> Differential Calculus – Leibnitz theorem(without proof) and applications - simple problems.
Week-3	<u>Unit-1:</u> Differential Calculus – Jacobians -simple problems. <u>Unit-2:</u> Curvature-Radius of Curvature in Cartesian coordinates - simple problems..
Week-4	<u>Unit-2:</u> Curvature-Radius of Curvature in parametric form -simple problems. First Internal Assessment Test.
Week-5	<u>Unit-2:</u> Curvature-Radius of Curvature in polar coordinates - simple problems...
Week-6	<u>Unit-3:</u> Pedal equations-simple problems.
Week-7	<u>Unit-3:</u> Involutives and Evolutes – simple problems.
Week-8	<u>Unit-3:</u> Involutives and Evolutes – simple problems. Second Internal Assessment Test.
Week-9	<u>Unit-4:</u> Envelopes – simple problems.
Week-10	<u>Unit-4:</u> Asymptotes– simple problems.
Week-11	<u>Unit-4:</u> Asymptotes– simple problems. <u>Unit-5:</u> Jacobians– simple problems.

Week-12	<u>Unit-5:</u> Maxima and minima of functions of 2 and 3 variables – simple problems.
Week-13	<u>Unit-5:</u> Lagrange's method – simple problems.
Week-14	Revision
Week-15	Model Exam

Subject Name : NME-1 - ANALYTICAL SKILLS AND APTITUDE
 Subject Code : 22UAMAN1
 Semester : I
 Staff in Charge : Mrs. D. Kalpana

Week	Topics to be Covered
Week-1	UNIT 1 :Arithmetical ability – problems in Numbers.
Week-2	Problems in fractions.
Week-3	Problems in roots.
Week-4	UNIT 2 : Basic formulae on simple interest. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Problems on simple interest.
Week-6	Problems on Compound interest.
Week-7	UNIT 3 :Permutations and combinations
Week-8	Probabilities. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Simple problems
Week-10	UNIT 4:Odd man out and series
Week-11	UNIT 5:Data interpretation
Week-12	Bar Graphs
Week-13	Pie Charts.
Week-14	Revision

Week-15	Model Examination
---------	-------------------

Subject Name : ALLIED MATHEMATICS-1
 (COMPUTER SCIENCE & CHEMISTRY)
 Subject Code : 22UAMAA1
 Semester : I
 Staff in Charge : Dr. K. THULUKKANAM & Dr.G.PALANI

Week	Topics to be Covered
Week-1	UNIT-1: Matrices-Characteristic Equation-Eigen values and Eigen vectors.
Week-2	Cayley Hamilton Theorem, Applications of Cayley Hamilton Theorem.
Week-3	UNIT-2: Theory of Equations – Polynomial Equations-Imaginary and irrational roots-simple problems.
Week-4	Transformation of equations. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Reciprocal Equations- simple problems
Week-6	UNIT -3:Differential Calculus – nth derivatives- simple problems.
Week-7	Leibnitz theorem(without proof) and applications – simple problems.
Week-8	Jacobians – simple problems. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT 4: Radius of Curvature in Cartesian coordinates – simple problems.
Week-10	Radius of curvature in Polar Coordinates – simple problems.
Week-11	Pedal equation of curve – simple problems.
Week-12	UNIT 5: Integral Calculus – Integration by parts – simple problems. Definite integrals and its properties – simple problems
Week-13	Reduction formula – Simple problems
Week-14	Revision
Week-15	Model Examination

Subject Name : ALLIED MATHEMATICS-1 (PHYSICS)
 Subject Code : 22UAMAA1
 Semester : I
 Staff in Charge : Dr. SHIRLEY GLORIA D. K.

Week	Topics to be Covered
Week-1	UNIT-1: Matrices-Characteristic Equation-Eigen values and Eigen vectors.
Week-2	Cayley Hamilton Theorem, Applications of Cayley Hamilton Theorem.
Week-3	UNIT-2: Theory of Equations – Polynomial Equations-Imaginary and irrational roots-simple problems.
Week-4	Transformation of equations. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Reciprocal Equations- simple problems
Week-6	UNIT -3:Differential Calculus – nth derivatives- simple problems.
Week-7	Leibnitz theorem(without proof) and applications – simple problems.
Week-8	Jacobians – simple problems. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT 4: Radius of Curvature in Cartesian coordinates – simple problems.
Week-10	Radius of curvature in Polar Coordinates – simple problems.
Week-11	Pedal equation of curve – simple problems.
Week-12	UNIT 5: Integral Calculus – Integration by parts – simple problems. Definite integrals and its properties – simple problems
Week-13	Reduction formula – Simple problems
Week-14	Revision
Week-15	Model Examination

Subject Name : DIFFERENTIAL EQUATIONS & LAPLACE TRANSFORMS
 Subject Code : 19UCMAC1
 Semester : III
 Staff in Charge : Dr. K. THULUKKANAM

Week	Topics to be Covered
------	----------------------

Week-1	Unit I: First order differential equations but of higher degree; solvable for p , solvable for x
Week-2	Solvable for y , Clairaut's form.
Week-3	Unit II : Second order ordinary differential equations with constant coefficients: RHS of the form $e^{ax}V$ where V is x^m (m is a positive integer), $\cos bx$, $\sin bx$
Week-4	Second order ordinary differential equations with variable coefficients FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Method of variation of parameters – simple problems.
Week-6	Unit III : Partial differential equations : Formation by eliminating arbitrary constants and arbitrary functions.
Week-7	complete integral; singular integral; general integral; the standard types $f(p,q) = 0$, $f(x,p,q) = 0$, $f(y,p,q) = 0$, $f(z,p,q) = 0$, $f(x,p) = f(y,p)$.
Week-8	Clairaut's form, Lagrange's equation $Pp+Qq=R$ SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Unit IV : Laplace Transforms.
Week-10	Inverse Laplace Transforms (usual types) – simple problems.
Week-11	Unit V : Applications of Laplace Transforms to solution of first order differential equation
Week-12	Second order linear differential equations(with constant coefficients only) – simple problems.
Week-13	Solving more problems under Unit V.
Week-14	Revision.
Week-15	Model Examination.

Subject Name : MATHEMATICAL STATISTICS
 Subject Code :19UCMAC2
 Semester :III

Staff in Charge : Mrs. D. KALPANA

Week	Topics to be Covered
Week-1	UNIT I: Probability: Definitions of various terms - Axiomatic Probability - Random Event - Mathematical Probability
Week-2	UNIT I: Addition and Multiplication Laws of Probability - Independent events
Week-3	UNIT I: Conditional Probability – Baye’s theorem - Simple applications UNIT II: Random Variables: Distribution functions - Discrete random variable - Continuous random variable
Week-4	UNIT II: Joint Probability mass function Joint Probability distribution function - Marginal distribution function First Internal Assessment Test and Assignment.
Week-5	UNIT II: Joint density function -conditional distribution function.
Week-6	UNIT III:Mathematical Expectation: Addition and Multiplication theorem - Covariance Expectation
Week-7	UNIT III: variance of linear combination of random variables - Moment generating function
Week-8	UNIT III: Characteristic function-Simple problems. Second Internal Assessment Test and Assignment.
Week-9	UNIT IV:Sampling Distributions: Testing statistical hypothesis: Null and alternate hypothesis – Type I and Type II errors – Powers of a test
Week-10	UNIT IV: Critical region – Level of significance – One/two tailed tests critical value. Large sample test: Test of significance for single mean and difference of means
Week-11	UNIT IV: Test of significance for single proportion and difference of proportions. UNIT-V : Small sample test: Students t-distribution,
Week-12	UNIT V: F-distribution - χ^2 - distribution (Definition only). Tests based on t (single mean, difference of means and paired t-test)
Week-13	UNIT V: F (difference between two variances) and χ^2 (independence of attributes only) distributions.
Week-14	Revision.
Week-15	Model Examinations.

Subject Name : **Personality Enrichment**

Subject Code : 19UCSBE3

Semester : **III**

Staff in Charge : Mr. K. SARAVANAN

Week	Topics to be Covered
------	----------------------

Week-1	Unit I : Introduction :Definition of Personality and Determinants of personality.
Week-2	Biological,psychological and socio-cultural factors.
Week-3	Misconceptions and classifications, need for personality development.
Week-4	Unit II: Self awareness and self motivation :Definition of self ,self concept and self awareness, self analysis through SWOT and johari window, definition of motivation. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Types of motivation, techniques and strategies for self motivation,motivation checklist.
Week-6	setting based on the principle of SMART self motivation and life
Week-7	Unit III:Memory and desision making : Definition and importance of memory.
Week-8	Causes of forgetting, techniques of improving memory and the decision making process. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Unit IV: Study skills :Definition of study skills and characteristics of study skills.
Week-10	Technics of passing examinations.
Week-11	UnitV : Assertiveness Definition and characteristics.
Week-12	Assertive,submissive and aggressive differences.
Week-13	Assertiveness skills.
Week-14	Revision.
Week-15	Model Examinations.

Subject Name :ENVIRONMENTAL STUDIES
 Subject Code : 19UCEVS1
 Semester :III
 Staff in Charge :Dr. O.S. BABU & Dr. K. THULUKKANAM

Week	Topics to be Covered
Week-1	UNIT I :Scope and importance of Environmental science: Definition,Multidisciplinary nature of environmental science.
Week-2	UNIT I :Scope and Importance

Week-3	UNIT I: Global environmental problems UNIT II: Ecosystems: Concept of an ecosystem,Structure and function of an ecosystem.
Week-4	UNIT II: Producers ,Consumers and decomposers.Energy flow in the ecosystem. First Internal Assessment Test and Assignment.
Week-5	UNIT II: Food chains,food webs and ecological pyramids.
Week-6	UNIT III: Biodiversity and its conservation: Introduction-Definition: Value of biodiversity
Week-7	UNIT III: Consumptive use,Productive use.India as a mega-diversity nation.
Week-8	UNIT III: Hotspots of biodiversity.Brief account on biodiversity conservation. Second Internal Assessment Test and Assignment.
Week-9	UNIT IV: Environmental pollution: Definition-Cause,effects and control measures of Air pollution,Water pollution
Week-10	UNIT IV: Solid waste management: Causes,effects and control measures of urban and industrial wastes.
Week-11	UNIT IV: Role of an individual in prevention of pollution. UNIT-V :Social Issues and the Environment: Water conservation ,rain water harvesting.
Week-12	UNIT V: Global warming,acid rain,ozon layer depletion
Week-13	UNIT V: Nuclear accidents,Wasteland reclamation.
Week-14	Revision.
Week-15	Model Examinations.

Subject Name : Abstract Algebra
 Subject Code :19UEMAC1
 Semester :V
 Staff in Charge :Dr. M. K. PURUSHOTHKUMAR

Week	Topics to be Covered
Week-1	Unit I Defn and examples of groups, Preliminary lemmas of groups
Week-2	Subgroups with examples
Week-3	A counting Principle
Week-4	Unit II Normal subgroups and Quotient groups FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT

Week-5	Homomorphisms
Week-6	Unit III Automorphism, Cayley's Theorem
Week-7	Permutation groups
Week-8	Unit IV Rings, Defn and examples Some special cases of rings SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Homomorphisms
Week-10	Ideals and Quotient rings
Week-11	Unit V More ideals and Quotient rings
Week-12	The field of Quotients of an integral Domain
Week-13	Euclidean rings
Week-14	Revision
Week-15	Model Examination

Subject Name : Real Analysis -I
 Subject Code : 19UEMAC2
 Semester : V
 Staff in Charge : Dr. G. PALANI

Week	Topics to be Covered
Week-1	UNIT-I : Functions – Real valued functions – Equivalence
Week-2	Countability – Real numbers – Least upper bounds
Week-3	Sequence of real numbers- Definition of sequence and subsequence – Limit of a sequence Convergent sequences – Divergent Sequences
Week-4	UNIT-II : Bounded sequences – monotone sequences FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Operations on convergent sequences – operations on divergent sequences

Week-6	Limit superior and limit inferior– Cauchy sequences.
Week-7	UNIT-III : Series of real numbers – Convergence and divergence - series with nonnegative terms
Week-8	Alternating series– conditional convergence and absolute convergence SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Test for absolute convergence– Series whose terms form a non increasing sequence.
Week-10	UNIT-IV: The class 12 – Schwarz inequality and Minkowski inequality. Limits and Metric spaces.
Week-11	Limit of a function on the real line – metric spaces - limits in metric spaces
Week-12	UNIT-V Continuous functions on Metric Spaces – Functions continuous at a point on the real line – reformulation - functions continuous on a Metric Space
Week-13	Open sets– closed sets
Week-14	Revision
Week-15	Model Examination

Subject Name : MECHANICS - II
 Subject Code : 19UEMAC3
 Semester : V
 Staff in Charge :Dr. A.R.RAGAVAN

Week	Topics to be Covered
Week-1	<u>Unit-1:</u> Kinematics – velocity, resultant of velocities, relative velocity, acceleration, velocity and acceleration in a rectilinear motion.
Week-2	<u>Unit-1:</u> Kinematics – coplanar motion, angular velocity, relative angular velocity.
Week-3	<u>Unit-1:</u> Kinematics – rectilinear motion when the acceleration is constant. <u>Unit-2:</u> Simple harmonic motion – Geometrical representation – composition of two simple harmonic motions – Particle suspended in a spring
Week-4	<u>Unit-2:</u> Simple harmonic motion – Simple pendulum–simple problems. First Internal Assessment Test.
Week-5	<u>Unit-2:</u> Projectiles – Equation of path – time of flight – greatest height– horizontal range – Range on an inclined plane – simple problems.
Week-6	<u>Unit-3:</u> Impact – direct impacts –simple problems.
Week-7	<u>Unit-3:</u> Impact- oblique impacts–simple problems.
Week-8	<u>Unit-3:</u> Impact on a smooth fixed plane – simple problems. Second Internal Assessment Test.

Week-9	<u>Unit-4:</u> Motion under central force – Differential equation of a central orbit in polar coordinates and in $p - r$ coordinates.
Week-10	<u>Unit-4:</u> Motion under central force – Given the path to find the law of forces-Inverse square law-simple problems
Week-11	<u>Unit-4:</u> Motion under central force –Given the law of forces to find the path-simple problems. <u>Unit-5:</u> Moment of Inertia – theorem of perpendicular axes and parallel axes.
Week-12	<u>Unit-5:</u> Moment of Inertia – moment of inertia of uniform bodies: thin rod, rectangular lamina, circular ring.
Week-13	<u>Unit-5:</u> Moment of Inertia – circular disc, elliptic lamina, solid sphere, hollow sphere, solid cone and hollow cone.
Week-14	Revision
Week-15	Model Exam

Subject Name : OPERATIONS RESEARCH
 Subject Code : 19UEMAC4
 Semester :V
 Staff in Charge :Dr.S.KARTHIGEYAN

Week	Topics to be Covered
Week-1	Unit I : Introduction to operations research-Linear Programming.
Week-2	Unit I : Formulation-Graphical solution.
Week-3	Unit I : Simplex method. Unit II : Big-M-Method
Week-4	Unit II: Two phase method-Duality. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Unit II : Primal and dual problems-Dual simplex method .
Week-6	Unit III : Game theory-Two people zero-Sum game with saddle point and without saddle point.
Week-7	Unit III: Dominance property-Solving $2 \times n$ game by graphical method.
Week-8	Unit III: Solving $2 \times m$ game by graphical method. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Unit IV: Transportation problem-Northwest corner rule-Least cost method.

Week-10	Unit IV: Vogel's Approximation method-MODI method-Degeneracy-.
Week-11	Unit IV : Unbalanced transportation problem Unit V: Assignment problem.
Week-12	Unit : Hungarian method-Unbalanced assignment problem.
Week-13	Unit V: Travelling salesman problem.
Week-14	Revision.
Week-15	Model Examinations.

Dr. AMBEDKAR GOVT. ARTS COLLEGE(AUTONOMOUS), CHENNAI-39
PG & RESEARCH DEPARTMENT OF MATHEMATICS
M.Sc. MATHEMATICS DEGREE PROGRAMME
TEACHING PLAN
ACADEMIC YEAR 2022-23 (ODD SEMESTER)

Subject Name :ABSTRACT ALGEBRA
 Subject Code :22PAMAC1
 Semester :I
 Staff in Charge :Dr.K.THULUKKANAM

Week	Topics to be Covered
Week-1	UNIT I:Another Counting Principle, double coset – the normalizer of a group.
Week-2	UNIT I: 1 st , 2 nd and 3 rd parts of Sylow's Theorems
Week-3	UNIT II: External and Internal direct Products – structure theorem for finite abelian groups
Week-4	UNIT II: non iso-morphic abelian groups. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT. UNIT III: Splitting Field
Week-5	UNIT III:Polynomial rings – Polynomials over rational fields
Week-6	UNIT III:the Eisenstein criterion - extension fields – roots of polynomials
Week-7	UNIT III:– roots of polynomials
Week-8	UNIT III: splitting fields. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT.
Week-9	UNIT IV: More about roots – simple extension – separable extension
Week-10	UNIT IV:fixed fields – symmetric rational functions – normal extension
Week-11	UNIT IV:Galois group – fundamental theorem of Galois theory.
Week-12	UNIT V:Solvability by radicals, Solvable group – the commutator subgroup – Solvability by radicals
Week-13	UNIT V:finite fields- Wedderburn Theorem.
Week-14	Revision.
Week-15	Model Examinations.

Subject Name : **Real Analysis-I**
 Subject Code : 22PAMAC2
 Semester : **I**
 Staff in Charge : Mr. K.SARAVANAN

Week	Topics to be Covered
Week-1	UNIT-I : Functions of bounded variation an Introduction and Properties of monotonic functions .
Week-2	Functions of bounded variation ,Total variation an introduction and Additive property of total variation ,Total variation on $[a, x]$ as a function of x
Week-3	Functions of bounded variation expressed as the difference of two increasing functions and Continuous functions of bounded variation.
Week-4	UNIT-II : The Riemann - Stieltjes Integral an Introduction and Notations. The definition of the Riemann - Stieltjes integral. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Linear Properties - Integration by parts- Change of variable in a Riemann - Stieltjes integral and Reduction to a Riemann Integral , Euler's summation formula.
Week-6	UNIT-III: Monotonically increasing integrators, Upper and lower integrals .Additive and linearity properties of upper and lower integrals
Week-7	Riemann's condition - Comparison theorems. The Riemann-Stieltjes Integral - Integrals of bounded variation-Sufficient conditions for the existence of Riemann-Stieltjes integrals
Week-8	--Necessary conditions for the existence of Riemann- Stieltjes integrals and Mean value theorems for Riemann - Stieltjes integrals. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT-IV : Infinite Series : Absolute and conditional convergence .
Week-10	Dirichlet's test and Abel's test - Rearrangement of series.Riemann's theorem on conditionally convergent series.
Week-11	UNIT-V: Sequences of Functions - Pointwise convergence of sequences of functions and Examples of sequences of real - valued functions, Uniform convergence of infinite series and functions.
Week-12	Definition of uniform convergence and Uniform convergence and continuity ,The Cauchy condition for uniform convergence.
Week-13	Uniform convergence and Riemann - Stieltjes integration – Uniform convergence and differentiation.
Week-14	Revision.
Week-15	Model Examinations.

Subject Name :ORDINARY DIFFERENTIAL EQUATIONS
 Subject Code :22PAMAC3
 Semester :I
 Staff in Charge :DR.A.SAROJINI

Week	Topics to be Covered
Week-1	UNIT I:Linear Equations with constant coefficients:Second order homogeneous equations,Initial Value Problem.
Week-2	UNIT I:Linear Dependence and Independence,Wronskian and a Formula for Wronskian.
Week-3	UNIT II: Homogeneous and Non-homogeneous equation of order n,Initial Value Problems.
Week-4	UNIT II:Annihilator Method to solve non-homogeneous equation. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT. UNIT III: Linear equation with variable co-efficients: Initial Value Problems.
Week-5	UNIT III:Existence and Uniqueness Theorems,Solutions to solve a non-homogeneous equation,
Week-6	UNIT III:Wronskian and linear dependence
Week-7	UNIT III:Reduction of the order of a homogeneous equation,Homogeneous equation with analytic co-efficients,
Week-8	UNIT III:The Legendre equation. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT IV:Linear equation with Regular singular points: Euler equation.
Week-10	UNIT IV:Second order equations with Regular singular points,Exceptional cases.
Week-11	UNIT IV:Bessel's function.
Week-12	UNIT V:Existence and uniqueness of solutions to First order Equations: Equations with variables separated,Exact equation,Method of successive approximations.
Week-13	UNIT V:The Lipschitz condition,Convergence of the successive approximations and the Existence theorem.
Week-14	Revision.
Week-15	Model Examinations.

Subject Name :Graph Theory
 Subject Code :22PAMAC4
 Semester :I
 Staff in Charge :Dr.J. Desdemona Kirubavathi

Week	Topics to be Covered
Week-1	Unit I Graphs- Defn and examples, Simple graphs, graph isomorphism
Week-2	Incidence and adjacency matrices, Subgraphs, Paths and connections
Week-3	Trees, Cut edges and bonds, Cut vertices
Week-4	Unit II Connectivity, Blocks FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Euler Tours and Hamilton cycles
Week-6	Unit III Matchings- Defns, examples, Berge's Theorem
Week-7	Matchings and Coverings in bipartite graphs
Week-8	Edge Colouring SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Unit IV Independent sets, Vertex colouring
Week-10	Brooks theorem, Chromatic polynomials
Week-11	Unit V Plane and planar graphs, defn and examples, Stereographic projection
Week-12	Dual graphs, Euler's formula
Week-13	Five colour theorem
Week-14	Revision
Week-15	Model Examination

Subject Name : Difference Equations
 Subject Code : 22PAMAE1B
 Semester : I
 Staff in Charge : Dr.A.R. RAGAVAN

Week	Topics to be Covered
Week-1	UNIT-I : Difference Calculus: Difference operator
Week-2	Summation

Week-3	Generating Functions and approximate summation.
Week-4	UNIT-II : Linear Difference Equations: First order equations FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	General Results for Linear Equations
Week-6	Solving Linear equations.
Week-7	UNIT-III : Linear Difference Equations(Contd.): Equations with variable coefficients
Week-8	Nonlinear Equations that can be Linearized. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT-IV : Z transform.
Week-10	Applications of Z transform- solving difference equations
Week-11	Applications of Z transform- solving integral equations
Week-12	UNIT-V : Stability Theory: Initial value problems for linear systems
Week-13	Stability of linear systems
Week-14	Revision
Week-15	Model Examination

Subject Name : EMPLOYABILITY SKILLS
 Subject Code : 22PASBE1
 Semester : I
 Staff in Charge : Dr.S.KARTHIGEYAN

Week	Topics to be covered
Week-1	UNIT I: Making Presentations – introducing oneself-introducing a topic-answering questions-individual presentation practice.
Week-2	UNIT I:Creating effective PPT's-presenting the visuals effectively.
Week-3	UNIT II: Using appropriate body language in professional contexts.
Week-4	UNIT II:Gestures, facial expressions,etc. First Internal Assessment Test and Assignment.
Week-5	UNIT II: Preparing job applications – writing covering letter and resume.
Week-6	UNIT III: Applying for jobs online – email – job portals.
Week-7	UNIT III: Participating in group discussions – understanding group dynamics.
Week-8	UNIT III:Brain storming the topic. Second Internal Assessment Test and Assignment.
Week-9	UNIT IV:Training in soft skills – persuasive skills.
Week-10	UNIT IV: People skills – questioning and clarifying skills.
Week-11	UNIT IV: Mock GD.
Week-12	UNIT V: Attending job interviews – answering questions confidently.
Week-13	UNIT V: Interview etiquette – dress code – body language – mock interview.
Week-14	Revision.
Week-15	Model Examinations.

Subject Name :MATHEMATICAL METHODS
 Subject Code :19PCMAC1
 Semester :III
 Staff in Charge :Dr.M.K.PURUSHOTHKUMAR

Week	Topics to be Covered
Week-1	UNIT I: Method of variations with fixed boundaries: Variation and its properties-Euler'sEquation-Functional dependence on first and higher order derivative
Week-2	UNIT I: functions ofseveral independent variables - Variational problems in parametric form – Someapplications –Problems.

Week-3	UNIT II: Variational Problems with moving boundaries: An Elementary problem with moving boundaries
Week-4	UNIT II: Moving Boundary Problem for a functional of the form $\int_{x_0}^{x_1} f(x, y, y', x') dx$ – Extremals with corners, onesided variations – Problems. FIRST INTERNAL ASSESSMENT TEST& ASSIGNMENT UNIT III: FOURIER TRANSFORMS: Fourier Transforms
Week-5	UNIT III: Fourier sine and cosine transforms – Fourier transforms of derivatives
Week-6	UNIT III: convolution integral
Week-7	UNIT III: Parseval's Theorem
Week-8	UNIT III: Solution of Laplace Equations by Fourier transform. SECOND INTERNAL ASSESSMENT TEST& ASSIGNMENT
Week-9	UNIT IV: Integral Equations: Introduction - Integral Equations with Separable Kernels
Week-10	UNIT IV: Reduction to a system of algebraic equations
Week-11	UNIT IV: Fredholm Alternative- An approximate method.
Week-12	UNIT V: Method of successive approximations: Iterative scheme – Volterra Integral Equation
Week-13	UNIT V: – Some results about the resolvent kernel.
Week-14	Revision.
Week-15	Model Examinations.

Subject Name : Differential Geometry
 Subject Code : 19PCMAC2
 Semester : III
 Staff in Charge : Dr. O S Babu

Week	Topics to be Covered
Week-1	UNIT-I : Space curves: Definition of a space curve – Arc length – tangent, normal and binormal

Week-2	curvature and torsion.
Week-3	UNIT –II: Space curves: Contact between curves and surfaces- tangent surface- involutes and evolutes
Week-4	Intrinsic equations – Fundamental Existence Theorem for space curves- Helices. FIRST INTERNAL ASSESSMENT TEST& ASSIGNMENT
Week-5	UNIT-III : Intrinsic properties of a surface: Definition of a surface – curves on a surface – Surface of revolution – Helicoids
Week-6	Metric- Direction coefficients.
Week-7	families of curves- Isometric correspondence- Intrinsic properties.
Week-8	UNIT-IV : . Geodesics: Geodesics – Canonical geodesic equations – Normal property of geodesics- Existence Theorems SECOND INTERNAL ASSESSMENT TEST& ASSIGNMENT
Week-9	Geodesic parallels – Geodesics curvature- Gauss- Bonnet Theorem
Week-10	Gaussian curvature- surface of constant curvature.
Week-11	UNIT-V : Nonintrinsic properties of a surface: The second fundamental form- Principal curvature - Lines of curvature

Week-12	Developables – Developables associated with space curves and with curves on surfaces
Week-13	Minimal surfaces – Ruled surfaces.
Week-14	Revision
Week-15	Model Examination

Subject Name : MATHEMATICAL STATISTICS
 Subject Code :19PCMAC3
 Semester : III
 Staff in Charge :Dr.SHIRLEY GLORIA D K

Week	Topics to be Covered
Week-1	UNIT-I: Probability axioms-Combinatorial formulae-Conditional probability-Bayes's theorem-independent events-concept of random variables-Distribution function
Week-2	UNIT-I: concept of random variables-Distribution function -Random variables of discrete and continuous types-functions of random variables
Week-3	UNIT-I: Marginal distribution-Conditional Distribution-independent random variables. UNIT-II: Parameters of the distribution of a random variable-Expectation
Week-4	UNIT-II: The Chebyshev inequality-absolute moments-Simple problems FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	UNIT-II: Order parameters-Moments of random vectors-simple problems
Week-6	UNIT-III: Characteristic functions-Properties of characteristic functions—characteristic functions and moments
Week-7	UNIT-III: Characteristic function of the sum of the independent random variables-simple problems
Week-8	UNIT-III: Determination of distribution function by the characteristic function - Probability generating function SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT-IV: Some probability distributions:The Bernoulli scheme-Binomial distribution-Poisson scheme-The generalized Binomial distribution.
Week-10	UNIT-IV: Poisson distribution-Uniform distribution-Normal distribution-Simple problems

Week-11	UNIT-IV: Gamma distribution-Beta distribution-Simple problems. UNIT-V: Sample moments and their functions: The notion of a sample-The notion of a statistic
Week-12	UNIT-V: Distribution of a arithmetic mean of independent normally distributed random variables -the chi-square distribution
Week-13	UNIT-V: The distribution of the statistics-student's t-distribution-Fisher's Z-distribution-Simple Problems
Week-14	Revision
Week-15	Model exam

Subject Name : STOCHASTIC PROCESSES

Subject Code :19PCMAE2B

Semester : III

Staff in Charge : Mrs.D.KALPANA

Week	Topics to be Covered
Week-1	UNIT 1 : Introduction to Stochastic Processes – Specifications of Stochastic Processes – Stationary processes – Martingales. Chapter 2 :Sec 2.1, 2.2
Week-2	Chapter 2: sec 2.3 to 2.4
Week-3	UNIT – II : Definition of Markov Chain – Higher transition probabilities – classification of states and chains – determination of higher transition probabilities –stability of Markov chain. Chapter 3 :sec 3.1,3.2
Week-4	Chapter3:sec 3.4 ,3.5,3.6 FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	UNIT -3 :Poisson process and related distributions – Generalizations of Poisson process. Chapter 4:Sections 4.1,4.2
Week-6	Chapter 4 :sec 4.3
Week-7	UNIT -4:Birth and death process – Markov processes with discrete state space-Erlang process. Chapter4 :Sections 4.4
Week-8	Sections 4.5 ,4.7 SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT 5:Renewal process – renewal processes in continuous time – renewal equation and renewal theorems. Chapter 6 : Section 6.1
Week-10	Chapter 6 : Section 6.2
Week-11	Chapter 6 : Section 6.3

Week-12	Chapter 6: Section 6.4
Week-13	Chapter 7:Section 6.5
Week- 14	Revision
Week -15	Model Examination

Subject Name : APPLIED STATISTICS
 Subject Code : 19PCMAD2
 Semester : III
 Staff in Charge : Dr.G.PALANI

Week	Topics to be Covered
Week-1	UNIT-I: Measures of central tendency: Mean, Median, Quartiles, Mode.
Week-2	UNIT-I: Measures of dispersion: Standard deviation, Mean deviation, Quartile deviation
Week-3	UNIT-I: Measures of dispersion: Co-efficient of variation-problems. UNIT-II: Karl pearson's coefficient of correlation
Week-4	UNIT-II: Spearman's rank co-efficient of rank correlation-problems FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	UNIT-II: Regression lines-Problems
Week-6	UNIT-III: Testing of hypothesis-introduction-Type I error & Type II error-Large sample test-Single mean
Week-7	UNIT-III: Large sample test-difference of means, single proportion
Week-8	UNIT-III: difference of proportions -problems SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT-IV: Small sample test:t-test for single mean-problems
Week-10	UNIT-IV: Small sample test:t-test for difference of means-problems
Week-11	UNIT-IV: Small sample test: paired t-tests-problems UNIT-V : F-test for difference of variances-problems
Week-12	UNIT-V: Chisquare test -problems
Week-13	UNIT-V: Chi-square test for independence for attributes -Problems
Week-14	Revision
Week-15	Model exam

Subject Name : MANAGERIAL SKILLS
 Subject Code : 19PCSBE3
 Semester : III
 Staff in Charge : Dr.SHIRLEY GLORIA D K

Week	Topics to be Covered
Week-1	UNIT-I: Time Management.
Week-2	UNIT-I: Organisational Awareness
Week-3	UNIT-I: Problem solving. UNIT-II: Leadership Qualities
Week-4	UNIT-II: Teamwork and office functional rule FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	UNIT-II: Being knowledgeable of Hierarchy in office, Conducting interviews
Week-6	UNIT-III: Conducting Meetings
Week-7	UNIT-III: Writing circulars,Agendas.
Week-8	UNIT-III: Minutes of meetings and passing resolutions SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT-IV: Business Communication,Email
Week-10	UNIT-IV: Project proposals,contracts
Week-11	UNIT-IV: Job application and CV UNIT-V : Office Etiquette,Dress code
Week-12	UNIT-V: Communication,Maintaining healthy work relationship
Week-13	UNIT-V: Effective use of technology at workplace
Week-14	Revision
Week-15	Model exam

Dr. AMBEDKAR GOVT. ARTS COLLEGE (AUTONOMOUS), CHENNAI-39
PG & RESEARCH DEPARTMENT OF MATHEMATICS
B.Sc. MATHEMATICS DEGREE PROGRAMME
TEACHING PLAN
ACADEMIC YEAR 2022-23 (EVEN SEMESTER)

Subject Name : **Laplace Transforms and Fourier Series**
 Subject Code : 22UBMAC2
 Semester : **II**
 Staff in Charge : DR.SHIRLEY GLORIA D K

Week	Topics to be Covered
Week-1	Unit I: Properties of definite integrals, Bernoulli's formula Reduction formulae.
Week-2	Bernoulli's formula and some problems.
Week-3	Reduction formulae and problems using reduction formulae.
Week-4	Unit II: Double and Triple integrals. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Changing the order of integration, Change of variables.
Week-6	Applications of Double and Triple integrals in finding area and volume (Cartesian coordinates only).
Week-7	Unit III: Beta and Gamma functions: Definitions and properties.
Week-8	Using properties of beta and Gamma functions solving problems. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Unit IV: Fourier series : Definition, Finding Fourier coefficients for a given periodic function with given period 2π .
Week-10	Solving Problems using Fourier series.
Week-11	Unit V: Fourier series for odd functions and problems.
Week-12	Fourier series for even functions and problems
Week-13	Half-range series in $(0,\pi)$
Week-14	Revision.
Week-15	Model Examinations.

Subject Name : FUNCTIONAL MATHEMATICS
 Subject Code : 22UBMAN2
 Semester : II
 Staff in Charge : DR.SHIRLEY GLORIA D K

Week	Topics to be Covered
Week-1	UNIT-I: Logic and arithmetical ability: Problems on ages
Week-2	UNIT-I: Problems on surds
Week-3	UNIT-I: Problems on indices UNIT-II: Basic formulae and problems on Profit and Loss.
Week-4	UNIT-II: Problems based on Ratio and Proportion.. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	UNIT-II: Problems based on Ratio and Proportion.
Week-6	UNIT-III: Basic formulae and problems on Time and Work
Week-7	UNIT-III: Problems based on Time and Work & Time and Distance.
Week-8	UNIT-IV: Problems based on Time and Distance. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT-IV: Basic formulae and problems on Trains
Week-10	UNIT-IV: Problems on Races.
Week-11	UNIT-IV : problems based on Games of Skill.
Week-12	UNIT-V: Basic formulae and problems on stocks and shares
Week-13	UNIT-V: Basic formulae and problems on stocks and shares
Week-14	Revision
Week-15	Model exam

Subject Name : ALLIED MATHEMATICS-II
 (COMPUTER SCIENCE, PHYSICS & CHEMISTRY)
 Subject Code : 22UBMAA2
 Semester : II
 Staff in Charge : Dr.K.THULUKKANAM & Mr.K.SARAVANAN (For CS & Chemistry)
 DR. SHIRLEY GLORIA D. K. (For Physics) .

Week	Topics to be Covered
------	----------------------

Week-1	UNIT -1:FOURIER SERIES : Definition,To find the Fourier coefficients of periodic functions of period 2π
Week-2	UNIT-2: Second order differential equation with constant coefficient-particular integral of the type e^{ax} , $\cos ax$
Week-3	Particular integral of the type $\sin ax$, $e^{ax}V$, Where V is any function of $\cos ax$ or $\sin ax$ or x^2
Week-4	UNIT 3: Laplace Transforms – Laplace transformation of standard functions FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Laplace transformations – simple properties
Week-6	Inverse Laplace transforms
Week-7	Application to solution of linear differential equations with constant coefficients
Week-8	UNIT 4:Vector Differentiation – Scalar point functions,Vector point functions,Gradient,Divergence. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Curl,Directional derivatives,normal to a surface
Week-10	UNIT 5:Vector Integration: Line,surface integral
Week-11	Volume integral-Gauss theorem
Week-12	Stoke's theorem
Week-13	Green's theorem
Week-14	Revision
Week-15	Model Examination

Subject Name : VECTOR CALCULAS

Subject Code : 19UDMAC1

Semester : IV

Staff in Charge :Dr.A.R.RAGAVAN

Week	Topics to be Covered
Week-1	UNIT-I: Vector point function - Scalar point function – Derivative of vector and derivative of sum of vectors.
Week-2	UNIT-I: derivative of product of scalar and vector point function – derivative of scalar
Week-3	UNIT-I: derivative of vector product. UNIT-II: Introduction - The vector operator ∇ - Gradient of a scalar pointfunction.

Week-4	UNIT-II: Divergence of a vector - Curl of a vector - Definitions of solenoidal and irrotational vectors , directional derivative FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	UNIT-II: unit normal to the surface, tangent and normal plane
Week-6	UNIT-III: Laplacian operator
Week-7	UNIT-III: vector identities
Week-8	UNIT-III: Problems based on vector identities. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT-IV: Line integral - Surface integral
Week-10	UNIT-IV: Volume integral-Simple problems.
Week-11	UNIT-V : Stokes Theorem(without proof)-simple problems.
Week-12	UNIT-V: Gauss-divergence Theorem(without proof)-Simple problems.
Week-13	UNIT-V: Green's Theorem in two dimensions(without proof) – simple problems
Week-14	Revision
Week-15	Model exam

Subject Name : MECHANICS-I
 Subject Code : 19UDMAC2
 Semester : IV
 Staff in Charge : Mr.K.SARAVANAN

Week	Topics to be Covered
Week-1	UNIT-I: Force: Newton's laws of motion-Forces-Types of forces, Resultant of two forces on a particle-problems
Week-2	UNIT-I: Resultant of three forces related to a triangle acting at a point-Resultant of several forces acting on a particle-Equilibrium of a particle-Problems
Week-3	UNIT-I: Equilibrium of a particle under three forces-under several forces-problems. UNIT-II: Forces on a rigid body: Moment of a force-Moment of a force about a line-scalar moment
Week-4	UNIT-II: Parallel forces: Point of application of resultant of many parallel forces-Varignon's theorem. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	UNIT-II: Parallel forces at the vertices of a triangle-forces along the sides of a triangle-simple problems

Week-6	UNIT-III: Couples:moment of a couple-arm and axis of a couple-Resultant of several coplanar forces-problems
Week-7	UNIT-III: Moment of a certain couple as an area-couples in a parallel planes-Resultant of a couple and a force
Week-8	UNIT-III: Equation of the line of action of the resultant:Sum of the moments about an arbitrary point. SECOND INTERNAL ASSESSMENT TEST& ASSIGNMENT
Week-9	UNIT-IV: Equilibrium of a rigid body under three coplanar forces:Co-tangent formula. A specific reduction of forces-problems
Week-10	UNIT-IV: A specific reduction of forces :Reduction of coplanar forces into a force and a couple-conditions of equilibrium under coplanar forces
Week-11	UNIT-IV: Problems involving frictional forces. UNIT-V: Centre of mass-centre of gravity-finding mass centre without using integration
Week-12	UNIT-V: Finding mass centre using integration
Week-13	UNIT-V: Finding mass centre using integration-simple problems
Week-14	Revision
Week-15	Model exam

Subject Name : VALUE BASED EDUCATION
 Subject Code :19UDVBE1
 Semester : IV
 Staff in Charge : Mrs.D.KALPANA

Week	Topics to be Covered
Week-1	UNIT -1,VALUES Definition and meaning of values – Human values,Social values
Week-2	Cultural and Religious values.
Week-3	Ethical values.
Week-4	Global values FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Spiritual values
Week-6	UNIT – 2,THE POWER OF POSITIVE THINKING Building Self Confidence
Week-7	UNIT -3,LEADERSHIP:The Challenge of Excellence
Week-8	Living Excellence SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT 4: THE PERSONAL VALUE OF TRUTH AND ITS IMPORTANCE
Week-10	The Story of My Experiments with Truth – M.K.Gandhi(Chapter2)
Week-11	UNIT 5 : HUMAN RIGHTS
Week-12	Universal Declaration of Human Rights
Week-13	Human Rights violations
Week-14	Revision
Week-15	Model Examination

Subject Name : LINEAR ALGEBRA
 Subject Code :19UFMAC1
 Semester :VI
 Staff in Charge :DR.M.K.PURUSHOTHKUMAR

Week	Topics to be Covered
------	----------------------

Week-1	UNIT I: Vector Spaces: Elementary basic concepts
Week-2	UNIT I: Linear dependence and bases
Week-3	UNIT II: Dual spaces
Week-4	UNIT II: Inner Product Spaces. First Internal Assessment Test and Assignment. UNIT III: Linear Transformations
Week-5	UNIT III: : The Algebra of Linear transformations.
Week-6	UNIT III: The Algebra of Linear transformations.
Week-7	UNIT III: Regular
Week-8	UNIT III: Theorems- linear transformations. Second Internal Assessment Test and Assignment.
Week-9	UNIT IV: Characteristic roots
Week-10	UNIT IV: Matrices.
Week-11	UNIT IV: Rank
Week-12	UNIT V: Canonical Forms
Week-13	UNIT V: Triangular form.
Week-14	Revision.
Week-15	Model Examinations.

Subject Name : REAL ANALYSIS-II
 Subject Code : 19UFMAC2
 Semester : VI
 Staff in Charge : DR. G. PALANI

Week	Topics to be Covered
Week-1	UNIT-I : More about open sets
Week-2	Connected sets
Week-3	Bounded sets and totally bounded sets

Week-4	UNIT –II: Complete metric spaces FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Compact metric spaces- continuous functions on compact metric spaces.
Week-6	Continuity of inverse function- uniform continuity.
Week-7	UNIT –III: Calculus: Sets of measure zero- definition of the Riemann Integral
Week-8	Properties of Riemann Integral. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT-IV : Derivatives
Week-10	Rolle's Theorem, Law of Mean- Fundamental Theorems of Calculus
Week-11	Taylor's Theorem.
Week-12	UNIT-V : Sequence and series of functions: Pointwise convergence
Week-13	Uniform convergence of sequence of functions.
Week-14	Revision
Week-15	Model Examination

Subject Name : COMPLEX ANALYSIS
 Subject Code : 19UFMAC3
 Semester : VI
 Staff in Charge :Dr.O.S.BABU

Week	Topics to be Covered
Week-1	UNIT-I: Functions of complex variables-Theorems on limits.
Week-2	UNIT-I: C-R equations-sufficient conditions-Analytic functions
Week-3	UNIT-I: Harmonic functions-problems. UNIT-II: Riemann's definition of contour integrals-Cauchy theorem.
Week-4	UNIT-II: Cauchy's integral formula -Formula for higher derivative. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	UNIT-II: Cauchy's inequality-Liouville's theorem-Fundamental theorem of algebra
Week-6	UNIT-III: Taylor's series-Laurent's series-problems

Week-7	UNIT-III: Zero's of an analytic functions-Types of singularities-simple problems.
Week-8	UNIT-IV: Residue-Cauchy residue theorem. SECOND INTERNAL ASSESSMENT TEST& ASSIGNMENT
Week-9	UNIT-IV: Evaluations of integrals around a unit circle
Week-10	UNIT-IV: Evaluation of improper real integrals with poles not on the real axis.
Week-11	UNIT-V : Transformations-Conformal mappings-Basic properties.
Week-12	UNIT-V: Mappings $\square = \frac{I}{\square}$, $\square = \square^2$, $\square = \square^\square$
Week-13	UNIT-V: Bilinear maps-Fixed points-Applications
Week-14	Revision
Week-15	Model exam

Subject Name : RESOURCE MANAGEMENT TECHNIQUES
 Subject Code : 19UFMAE1B
 Semester :VI
 Staff in Charge :Dr.S.KARTHIGEYAN

Week	Topics to be Covered
Week-1	Unit I : PERT and CPM.
Week-2	Unit I : Project network diagram-critical path.
Week-3	Unit I : PERT computations. Unit II : Inventory Models-Basic concepts-EOQ models
Week-4	Unit II: Uniform demand rate,infinite production rate with and without shortages. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Unit II : Uniform demand rate,finite production rate with and without shortages.
Week-6	Unit III : Deterministic models with price breaks-Purchase inventory model:with one price break.
Week-7	Unit III: Purchase inventory model:with two price breaks and with any number of price breaks-Classical news paper.
Week-8	Unit III: Boy problem with discrete demand. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Unit IV: Queuing theory-basic concepts-Steady state analysis of M/M/1.
Week-10	Unit IV: Steady state analysis of M/M/C-Systems with infinite capacities

Week-11	Unit IV :Systems with infinite capacities Unit V :Sequencing problems-n-jobs through 2 machines .
Week-12	Unit :Sequencing problems-n-jobs through 3 machines
Week-13	Unit V :Sequencing problems-2-jobs through m machines-n jobs through m machines.
Week-14	Revision.
Week-15	Model Examinations.

Subject Name :Graph Theory
 Subject Code : 19UFMAE2A
 Semester :VI
 Staff in Charge :Dr.J. Desdemona Kirubavathi

Week	Topics to be Covered
Week-1	Unit I Introduction- Graphs and subgraphs, Defn and examples, Degrees, Subgraphs
Week-2	Isomorphism, Independent sets and coverings
Week-3	Intersection graphs and line graphs, Matrices
Week-4	Unit II Degree sequences, Graphic sequences-Simple problems FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Connectedness: Walks,trails and paths, connecedness and components
Week-6	Blocks and Connectivity
Week-7	Unit III Eulerian graphs
Week-8	Hamiltonian graphs FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Unit IV Trees Defn, examples, Centre of a tree
Week-10	Characterization of trees
Week-11	Unit V Planarity: Introduction,Defn and properties
Week-12	Directed graphs; Defn,Basic properties,paths and connections
Week-13	Digraphs and matrices
Week-14	Revision
Week-15	Model Examination

Dr. AMBEDKAR GOVT. ARTS COLLEGE (AUTONOMOUS), CHENNAI-39
PG & RESEARCH DEPARTMENT OF MATHEMATICS
M.Sc. MATHEMATICS DEGREE PROGRAMME
TEACHING PLAN
ACADEMIC YEAR 2022-23 (EVEN SEMESTER)

Subject Name :Linear Algebra
 Subject Code :22PBMAC1
 Semester :II
 Staff in Charge :Dr.K.THULUKKANAM

Week	Topics to be Covered
Week-1	UNIT I:Linear transformations – Isomorphism of vector spaces
Week-2	Representations of linear transformations by matrices – Linear functionals.
Week-3	UNIT II:The algebra of polynomials –Polynomial ideals
Week-4	The prime factorization of a polynomial
Week-5	Determinant functions. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-6	UNIT III:Permutations and the uniqueness of determinants – Classical adjoint of a (square) matrix
Week-7	Inverse of an invertible matrix using determinants
Week-8	Characteristic values – Annihilating polynomials. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT IV: “Diagonalization” Invariant subspaces – Simultaneous triangulations
Week-10	Simultaneous diagonalization – Direct-sum decompositions
Week-11	Invariant direct sums – Primary decomposition theorem.
Week-12	UNIT V: “The Rational and Jordan forms” Cyclic subspaces – Cyclic decompositions theorem (Statement only)
Week-13	Generalized Cayley – Hamilton theorem - Rational forms – Jordan forms.

Week-14	Revision.
Week-15	Model Examination.

Subject Name : **Real Analysis-II**
 Subject Code : 22PBMAC2
 Semester : **II**
 Staff in Charge : Dr. G. PALANI

Week	Topics to be Covered
Week-1	UNIT-I : Measure on the Real line - Lebesgue Outer Measure .
Week-2	Measurable sets.
Week-3	Measurable Functions.
Week-4	UNIT-II : Integration of Functions of a Real variable - Integration of Non-negative functions . FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	The General Integral , Riemann and Lebesgue Integrals.
Week-6	UNIT-III : Fourier Series and Fourier Integrals - Introduction and Orthogonal system of functions .
Week-7	The theorem on best approximation - The Fourier series of a function relative to an orthonormal system.
Week-8	Properties of Fourier Coefficients and The Riesz-Fischer Theorem. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT-IV : Multivariable Differential Calculus - Introduction - The Directional derivative - Directional derivative and continuity.
Week-10	The total derivative and The total derivative expressed in terms of partial derivatives - The matrix of linear function.
Week-11	The Jacobian matrix and The chain rule - The mean - value theorem for differentiable functions - A sufficient condition for differentiability.
Week-12	UNIT-V : Implicit Functions and Extremum Problems : Functions with non-zero Jacobian determinants .
Week-13	The inverse function theorem- and The Implicit function theorem.
Week-14	Revision.

Week-15	Model Examinations.
---------	---------------------

Subject Name :Partial Differential equations
 Subject Code :22PBMAC3
 Semester :II
 Staff in Charge :Dr.J. Desdemona Kirubavathi

Week	Topics to be Covered
Week-1	Unit I Formation and solution of PDE of first order,Cauchy problem, Orthogonal surfaces
Week-2	Compatible systems,Charpits method
Week-3	Classification and canonical forms of PDE
Week-4	Unit II Elliptic Differential equations-Derivation of Laplace and Poisson equation,BVPs, Variables separable solution FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Dirichlet and Neumann problem for a rectangle, Interior and exterior Dirichlet problem for a circle
Week-6	Interior Neumann problem for a circle, Solution of Laplace equation in cylindrical and spherical coordinates
Week-7	Unit III Parabolic differential equations- Derivation and elementary solution of diffusion equation, Separation of Variables method
Week-8	Solution of diffusion equation in cylindrical and spherical coordinates SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Unit IV Hyperbolic differential equations-Occurrence and solution of wave equation (1D), solution by canonical reduction,D Alembert solution, Vibrating string problem
Week-10	Riemann Volterra solution, separable method,simple problems
Week-11	Solution of 1D wave equation in cylindrical and spherical coordinates, Uniqueness theorem
Week-12	Unit V Solution of PDE using Laplace Transforms
Week-13	Solution of PDE using Fourier transforms
Week-14	Revision
Week-15	Model Examination

Subject Name :TOPOLOGY
 Subject Code :22PBMAC4
 Semester :II

Staff in Charge :DR.M.K.PURUSHOTHKUMAR

Week	Topics to be Covered
Week-1	UNIT I:The definition and some Examples- Elementary concepts - open bases and open subbases
Week-2	UNIT I:weak topologies - The function Algebras $C(X,R)$ and $C(X,C)$.
Week-3	UNIT II: Compactness: Compact Spaces – Products of Spaces
Week-4	UNIT II: Tychonoff's Theorem and locally compact spaces. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT. UNIT III: Compactness for metric spaces
Week-5	UNIT III: Ascoli's Theorem – Separation: T_1 – spaces and Hausdorff spaces- Completely Regular spaces and Normal spaces
Week-6	UNIT III: Separation: T_1 – spaces and Hausdorff spaces
Week-7	UNIT III: Completely Regular spaces
Week-8	UNIT III: Normal spaces SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT.
Week-9	UNIT IV: Urysohn's Lemma and The Tietze extension theorem
Week-10	UNIT IV: The Urysohn's imbedding Theorem
Week-11	UNIT IV: Connected spaces
Week-12	UNIT V: The Components of a space – Totally disconnected spaces
Week-13	UNIT V: locally connected spaces. Approximation: The Weierstrass approximation Theorem.
Week-14	Revision.
Week-15	Model Examinations.

Subject Name : NUMERICAL ANALYSIS
 Subject Code :22PBMAE1A
 Semester : II
 Staff in Charge : Mrs.D.KALPANA

Week	Topics to be Covered
Week-1	UNIT 1 : The solution of nonlinear equations $f(x)=0$. The solution of linear system $AX=B$. Chapter 2 : sec 2.1 to 2.4

Week-2	Chapter 2: sec 2.6 to 2.7
Week-3	Chapter3:sec3.3 to 3.5
Week-4	Chapter3:sec 3.6 ,3.7 FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	UNIT 2:Interpolation and polynomial approximation – Curve fitting. Chapter 4 :sec 4.1 , 4.2
Week-6	Chapter 4 :sec 4.3 ,4.4
Week-7	Chapter5 :sec5.1 ,5.2
Week-8	UNIT 3: Numerical Differentiation – Numerical Integration Chapter6 :sec6.1,6.2 SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Chapter 7 :sec 7.1,7.2
Week-10	UNIT 4 :Solution of ordinary differential equations Chapter 9:sec 9.1,9.2,9.3
Week-11	Chapter 9: sec 9.4,9.5,9.6
Week-12	UNIT 5: Solution of partial differential equations Chapter 10 : sec 10.1,10.2
Week-13	Chapter :10.3
Week- 14	Revision
Week -15	Model Examination

Subject Name :MATHEMATICS FOR COMPETITIVE EXAMINATIONS
 Subject Code :22PBMAD1
 Semester :II
 Staff in Charge :Mrs. D. KALPANA

Week	Topics to be Covered
Week-1	UNIT I:Problems of Ages,
Week-2	UNIT I: Surds and indices.
Week-3	UNIT II: Profit and Loss,
Week-4	UNIT II: Ratio and Proportions. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT UNIT III: Time

Week-5	UNIT III: work,
Week-6	UNIT III: Time and distance
Week-7	UNIT III: Time and distance
Week-8	UNIT III:Time and work SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT IV: Permutations and
Week-10	UNIT IV:Combinations
Week-11	UNIT IV:Permutations and Combinations
Week-12	UNIT V: Stocks
Week-13	UNIT V: Shares.
Week-14	Revision.
Week-15	Model Examinations.

Subject Name : LEADERSHIP & COMMUNICATION SKILLS
 Subject Code :22PBSBE2
 Semester : II
 Staff in Charge : Dr.SHIRLEY GLORIA D.K.

Week	Topics to be covered
Week-1	UNIT I: Leadership-Nature,characteristics or features of leadership-objectives of leadership.
Week-2	UNIT I: Functions or role of a leader-Qualities of a good leader-skills of a leader.
Week-3	UNIT I: Leader Vs Manager-Leadership and management. UNIT II: Leadership styles-Autocratic leadership-Democratic leadership
Week-4	UNIT II:Laissez-Faire leadership or free rein leadership-Bureaucratic leadership style FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	UNIT II:Supportive leadership-Charismatic leaders.
Week-6	UNIT III: Communication-Elements of communication-Process of communication.
Week-7	UNIT III: Functions of communication-Features of communication-.

Week-8	UNIT III:Benefits of communication-Principles of communication SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	UNIT IV:Methods or types of communication-Formal communication-Merits and demerits-informal communication or grapevine.
Week-10	UNIT IV: Merits and demerits-Rumour-Reasons for spread of rumours-Negative impact of rumours-methods to deal with rumours.
Week-11	UNIT IV: Formal Vs informal communication. UNIT V : Oral communication-Written communication-downward communication
Week-12	UNIT V: Upward communication-Horizontal communication-Types of communication networks.
Week-13	UNIT V: Barriers to communication-Steps to overcome barriers to communication..
Week-14	Revision.
Week-15	Model Examinations.

Subject Name :COMPLEX ANALYSIS
 Subject Code :19PDMAC1
 Semester :IV
 Staff in Charge :DR.A.SAROJINI

Week	Topics to be Covered
Week-1	UNIT I:Cauchy's Integral Formula: Definition of Analytic Function and Introduction to Complex Integration,The Index of a point with respect to a closed curve,The integral formula,Higher Derivatives.
Week-2	UNIT I:Local properties of Analytic functions: Removable singularities,Taylor's Theorem,Zeros and Poles.
Week-3	UNIT I: The Local Mapping,The maximum principle. UNIT II:The General form of Cauchy's Theorem: Chains and Cycles.
Week-4	UNIT II:Simple continuity,Homology,The General statement of Cauchy's Theorem,Proof of Cauchy's Theorem. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	UNIT II:Calculus of Residues: The Residue Theorem,The Argument Principle.
Week-6	UNIT III:Harmonic Functions: Definition of Harmonic function and basic properties,Mean Value Property.
Week-7	UNIT III:Poisson Formula. Harmonic functions and Power series expansions: Schwarz Theorem,The Reflection Principle.

Week-8	UNIT III:Weierstress's Theorem,Taylor's series,Laurent series. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT.
Week-9	UNIT IV:Partial Fractions and Factorization: Partial Fractions,Infinite Products.
Week-10	UNIT IV:Canonical Products,Gamma function. UNIT V:Simply Periodic Functions: Representation by Exponentials.
Week-11	UNIT V:The Fourier Developments,Functions of Finite order. Doubly Periodic Functions: The Period Module.
Week-12	UNIT V:Unimodular Transformations,Canonical basis,General Properties of Elliptic functions.
Week-13	UNIT V:The Weierstrass Theory: The Weierstrass P function,The functions $\wp(\omega)$ and $\wp'(\omega)$,The Differential Equation.
Week-14	Revision.
Week-15	Model Examinations.

Subject Name : OPTIMIZATION TECHNIQUES

Subject Code : 19PDMAC2

Semester :IV

Staff in Charge :Dr.S.KARTHIGEYAN

Week	Topics to be Covered
Week-1	Unit I :Integer Linear Programming: Introduction – Importance of Integer Programming Problem
Week-2	Unit I :Gomory's Cutting Plane Method.
Week-3	Unit I :Branch and Bound Method.. Unit II :Goal Programming : Introduction - Concept of Goal Programming
Week-4	Unit II : Goal Programming Model formulation – Graphical Solution Method of Goal Programming. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Unit II :Modified Simplex method of Goal Programming.
Week-6	Unit III :Classical Optimization Techniques: Introduction – Unconstrained Optimization – Constrained Multi-variable Optimization with Equality Constraints
Week-7	Unit III :Lagrangian Method - Constrained Multi-variable Optimization with inequality Constraints – Kuhn-Tucker conditions.
Week-8	Unit III :Non-linear Programming Problem: Introduction – Formulation of NLPP – General NLPP – Graphical solution. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Unit IV : Quadratic Programming: Introduction – Kuhn-Tucker conditions.

Week-10	Unit IV: General Quadratic Programming Problem – Wolfe’s Modified simplex method
Week-11	Unit IV : Beale’s Method. Unit V: Dynamic Programming: Introduction – Bellman’s Principle of Optimality.
Week-12	Unit V : Minimum Path problem – Single additive constraint: Multiplicative separable return
Week-13	Unit V: Additively separable return – Single multiplicative constraint:Additively separable return.
Week-14	Revision.
Week-15	Model Examinations.

Subject Name : FUNCTIONAL ANALYSIS

Subject Code : 19PDMAC3

Semester : IV

Staff in Charge : Mr. K. SARAVANAN

Week	Topics to be Covered
Week-1	<u>Unit-1:</u> Banach Spaces : Definition – Some examples.
Week-2	<u>Unit-1:</u> Banach Spaces : Continuous Linear Transformations.
Week-3	<u>Unit-1:</u> Banach Spaces : The Hahn-Banach Theorem . <u>Unit-2:</u> The natural embedding of N in N^{**} .
Week-4	<u>Unit-2:</u> - Open mapping theorem –closed graph theorem. First Internal Assessment Test.
Week-5	<u>Unit-2:</u> Conjugate of an operator.
Week-6	<u>Unit-3:</u> Hilbert Spaces - Definition and properties.
Week-7	<u>Unit-3:</u> Hilbert Spaces – Bessel's inequality – Orthogonal complements.
Week-8	<u>Unit-3:</u> Hilbert Spaces - Orthonormal sets. Second Internal Assessment Test.
Week-9	<u>Unit-4:</u> Conjugate space H^* - Adjoint of an operator – Self-adjoint operator.
Week-10	<u>Unit-4:</u> Conjugate space H^* - Normal and Unitary Operators.
Week-11	<u>Unit-4:</u> Projections. <u>Unit-5:</u> Preliminaries on Banach Algebras : Definition and some examples.
Week-12	<u>Unit-5:</u> Preliminaries on Banach Algebras: Regular and singular elements – Topological divisors of zero.
Week-13	<u>Unit-5:</u> Preliminaries on Banach Algebras : Spectrum – the formula for the spectral radius – the radical and semi-simplicity.
Week-14	Revision
Week-15	Model Exam

Subject Name :Mechanics
 Subject Code :19PDMAC4
 Semester :IV
 Staff in Charge :Dr.O S Babu

Week	Topics to be Covered
Week-1	UNIT-I: Mechanical Systems: The Mechanical system- Generalized coordinates
Week-2	Constraints - Virtual work
Week-3	Energy and Momentum
Week-4	UNIT-II: Lagrange's Equations: Derivation of Lagrange's equation- Examples FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Integrals of the motion
Week-6	UNIT-III: Hamiltonian's Equations: Hamiltonian's Principle - Hamiltonian's Equations
Week-7	Other variational principles.
Week-8	UNIT-IV: Hamilton-Jacobi Theory: Hamilton's Principle function SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Hamilton –Jacobi Equation
Week-10	Separability.

Week-11	UNIT-V: Canonical Transformation: Differential forms and generating functions
Week-12	Special Transformations
Week-13	Lagrange and Poisson brackets.
Week-14	Revision
Week-15	Model Examination

Subject Name : Fluid Dynamics
 Subject Code :19PDMAE1C
 Semester : IV
 Staff in Charge : Dr. A.R. RAGAVAN

Week	Topics to be Covered
Week-1	UNIT-I : Kinematics of Fluids in motion. Real fluids and Ideal fluids- Velocity of a fluid at a point, Stream lines , path lines , steady and unsteady flows- Velocity potential - The vorticity vector
Week-2	Local and particle rates of changes - Equation of continuity - Worked examples - Acceleration of a fluid
Week-3	UNIT –II: Equations of motion of a fluid. Pressure at a point in a fluid at rest.- Pressure at a point in a moving fluid
Week-4	Euler's equation of motion - Bernoulli's Equation– Examples FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	UNIT –III: Some three dimensional flows. Introduction- Sources, sinks and doublets
Week-6	Images in a rigid infinite plane

Week-7	Axi symmetric flows : Stokes streamfunction
Week-8	UNIT-IV : Some two dimensional flows : Meaning of two dimensional flow – Use of Cylindrical polar coordinates - The stream function SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	The complex potential for two dimensional , irrotational, incompressible flow - Complex velocity potentials for standard two dimensional flows - Some worked examples
Week-10	Two dimensional Image systems - The Milne Thompson circle Theorem and some of its applications.
Week-11	UNIT-V : Stress components in a real fluid. - Relations between Cartesian components of stress- Translational motion of fluid element
Week-12	The rate of strain quadric and principle stresses - Some further properties of the rate of strain quadric - Stress analysis in fluid motion - Relation between stress and rate of strain
Week-13	The coefficient of viscosity and Laminar flow - The Navier – Stokes equations of motion of a Viscous fluid
Week-14	Revision
Week-15	Model Examination

Subject Name : **Personality Development**
 Subject Code : 19PDSBE4
 Semester : **II**
 Staff in Charge : Dr. K.THULUKKANAM

Week	Topics to be Covered
Week-1	Unit I: Personality definition, determinants, heredity.
Week-2	Environment and situation.
Week-3	Self awareness and benefits of self awareness.
Week-4	Unit II :Enhancing self awareness: self analysis, behaviour and motivation. FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	Modes of thinking, modes of acting and modes of interacting.

Week-6	Unit III: The BIG FIVE model: Extroversion,agreeableness.
Week-7	Emotional stability and conscientiousness.
Week-8	Openness to experience and self-monitoring. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Unit IV:Traits for building positive personality: Chief traits for building personality.
Week-10	Concious programming and subconscious programming.
Week-11	Unit V: Personal grooming: Men dress,shirts,trousers,ties,socks,shoes belts and watches.
Week-12	Women dress, hair,shoes /sandal,bags.
Week-13	Accessories.
Week-14	Revision.
Week-15	Model Examinations.

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039**

**PG DEPARTMENT OF SOCIAL WORK
LESSON PLAN**

ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)

DEGREE: MSW

COURSE CODE: 22PASWC1

COURSE NAME: SOCIAL WORK PROFESSION

SEMESTER NO: I

STAFF NAME: E. NESAMANI RAHEL JENIFER

WEEK	TOPICS TO BE COVERED
Week-1	Historical Evolution of Social Work; International Perspectives: UK, USA, Social Work in India: Socio-cultural and religious thought; Contributions of Social Reformers and Social Movements - E.V.R. Periyar
Week-2	Raja Ram Mohan Roy, Ambedkar; Dalit and Backward Class Movements, Gandhian ideology and Sarvodaya Movement;
Week-3	Christian Missionaries, Gandhian Social Work, India as a Welfare State, Contributions of Voluntary organizations.
Week-4	Meaning & definition; basic concepts; goals and functions; methods and fields;
Week-5	origin and growth in India, scope and status, International/ national bodies and forums social work education;
Week-6	importance of fieldwork and supervision; problems and status; bodies/ forums in education, curriculum recommendations of UGC,
Week-7	Social Work Ideologies, Theories and Approaches; Ideologies: Philanthropy, humanitarianism, welfarism, socialism, democracy, Marxism, equality, human rights and social justice;
Week-8	Models: welfare, developmental, empowerment and advocacy models, approaches
Week-9	remedial, rehabilitative, preventive and promotive approaches, rights based, participatory, indigenous approaches, anti-discriminatory practice.
Week-10	Values, Beliefs and Principles of the Profession; Code of Ethics:
Week-11	Evolution of Code of Ethics, IFSW & IASSW Ethics in Social Work, Statement of Principles, Declaration of Ethics for Social Workers (SWEF -1997).
Week-12	Concept, definition, meaning and need, global issues, basic concepts, principles and assumptions
Week-13	values, beliefs and goals; practice levels and sectors; approaches:
Week-14	personal, social, developmental, global;
Week-15	multicultural, international and transnational practice models; Global Agenda; Global Standards; Skills for practice; Dilemmas in practice.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039**

PG DEPARTMENT OF SOCIAL WORK

LESSON PLAN

ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)

DEGREE: MSW

COURSE CODE: 22PASWC2

COURSE NAME: SOCIAL WORK PRACTICE WITH INDIVIDUALS

SEMESTER NO: I

STAFF NAME: E. NESAMANI RAHEL JENIFER

WEEK	TOPICS TO BE COVERED
Week-1	Introduction to Working with Individuals (Social Casework); Historical development of Social Case Work as a Method of Social Work,
Week-2	Concept and Definition, Philosophy, Values, Principles, Skills, Components, Case Work Relationship:
Week-3	Empathy, Skills in Building Relationship, Transference and Counter Transference, Difference between Casework, Counselling and Psychotherapy
Week-4	The Helping Process Phase I- Psychosocial Study, Psychosocial Assessment
Week-5	Phase II- Intervention Plan and Goal Setting, Intervention
Week-6	Phase III- Termination, Evaluation and Follow up.
Week-7	Models and Approaches Psychoanalytic Approach, Psychosocial, Functional, Client Centered,
Week-8	Cognitive Behavioural Approach, Life Model, Task Centered, Strength Based,
Week-9	Evidence Based Approach, Ecological approach, Integrated Approach.
Week-10	Tools and Techniques in working with Individuals Observation, Interviews, Home Visits,
Week-11	Collateral Contacts, Resource Mobilization, Referrals, Environment modification, Communication
Week-12	Case Work in different Settings and Recording Case work in hospitals, schools,
Week-13	communities, institutional setting and industry;
Week-14	Types of recording-verbatim, narrative,
Week-15	condensed, analytical, topical, summary recording

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039**

PG DEPARTMENT OF SOCIAL WORK

LESSON PLAN

ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)

DEGREE: MSW

COURSE CODE: 22PASWC3

COURSE NAME: SOCIAL WORK PRACTICE WITH GROUPS

SEMESTER NO: I

STAFF NAME: E. NESAMANI RAHEL JENIFER

WEEK	TOPICS TO BE COVERED
Week-1	Introduction to Working with Groups (Social Group Work) Historical development of Social Group Work as a Method,
Week-2	definition and meaning, purpose, objectives, values, skills, principles, use of groups in practice.
Week-3	Types of Groups :Definition and characteristics of groups, importance of groups in human life
Week-4	primary and secondary groups, formal and informal groups, open and closed groups,
Week-5	reference groups, treatment groups, task groups, developmental groups.
Week-6	Phases of Group Work Process :Planning Phase: establishing purpose, assessing recruiting, orienting, contracting, preparing group environment; Beginning Phase:
Week-7	introduction, motivation, member feedback, defining purpose, objectives, goal setting, assessment; Middle Phase:
Week-8	preparing for meetings, structuring the group work, intervention strategies in groups-programme planning and implementation – meaning and principles of programme planning.
Week-9	Monitoring and evaluating group process; Ending Phase: preparing for termination; evaluation and feedback
Week-10	Stages of Group Development and Dynamics : Stages in a group development: new comers, isolation, rejection, group-bond,
Week-11	sub groups, clique, gang, dyad, triad, group norms, membership, cohesiveness, group pressure, group morale,
Week-12	leadership, team building, decision making, problem solving, conflict management, communication in a group, role clarity, use of sociometry
Week-13	Group Work Models and Practice in different settings : Social goals model, remedial model, reciprocal model, practice in different settings:
Week-14	hospital, school, community, industry and institutional setting, recording:
Week-15	importance of recording, skills required for recording in group work, types of recording in group work

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG DEPARTMENT OF SOCIAL WORK
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE: MSW

COURSE CODE: 22PASWD1

COURSE NAME: SOCIOLOGY AND PSYCHOLOGY FOR SOCIAL WORK PRACTICE

SEMESTER NO: I

STAFF NAME: E. NESAMANI RAHEL JENIFER

WEEK	TOPICS TO BE COVERED
Week-1	Sociology: Meaning and Characteristics of Society, Community, Social Group, Social Association and Social Institution.
Week-2	Social Structure and functions of Social Institutions - marriage, family, kinship, caste, religion and education. Linkages between Sociology & Social Work Socialization: Process and agents. Social control:
Week-3	Concept, types and functions. Major Agents of Social control: Kinship, Religion, Law, Education, Traditions and Customs.
Week-4	Process of Social Change: Urbanization, Industrialization, Westernization, Sanskritization, Secularization.
Week-5	Resistance to social change-cultural lag and Ethnocentrism.
Week-6	Social stratification in India: the concept of stratification, class, caste, casteism and communalism, social inequality and social mobility.
Week-7	Social Problems: role of social workers in Indian problems like Corruption, Malnourishment, Child Abuse,
Week-8	violence against women & Sexual minorities (Transgender) - Human Trafficking, Communalism, Terrorism and environment degradation.
Week-9	Psychology: Concept: Science of mind, Science of behavior- Conscious& Subconscious processes and motivation.
Week-10	Developmental stages & Developmental tasks. Areas of Human Development - Social, emotional, cognitive and physical- Relevance of Psychology to Social Work. Psychological Processes in Behavior:
Week-11	Needs and Motives, Emotions, Intelligence, Learning and motivation. Factors Influencing Human Behavior: Heredity and Environment. Personality: types of personality.
Week-12	Psychology: Concept: Science of mind, Science of behavior- Conscious& Subconscious processes and motivation. Developmental stages & Developmental tasks.
Week-13	Areas of Human Development - Social, emotional, cognitive and physical- Relevance of Psychology to Social Work.
Week-14	Psychological Processes in Behavior: Needs and Motives, Emotions, Intelligence, Learning and motivation. Factors Influencing Human Behavior: Heredity and Environment. Personality: types of personality.
Week-15	Intervention methods: concept of psychological Counseling and psychological Testing, Achievements Test and Attitude test. The basic concepts of psychometrics and Testing

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG DEPARTMENT OF SOCIAL WORK
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (EVEN SEMESTER)**

DEGREE: MSW

COURSE CODE: 22PBSWC1

COURSE NAME: COMMUNITY ORGANIZATION & SOCIAL ACTION

SEMESTER NO: I

STAFF NAME: E. NESAMANI RAHEL JENIFER

WEEK	TOPICS TO BE COVERED
Week-1	Community: Meaning and definition, community as a social system; subsystems in community; types of communities and characteristics, theories of communities, community power structure:
Week-2	concept of community power, types, people's power-its place in communities, community dynamics: integrative and disintegrative process;
Week-3	participative groups and groupism; factions and subgroups; minority groups; decision making and problem-solving processes.
Week-4	Models of Community Organization; Evolution of CO as a method in Social Work; Community Organization:
Week-5	definition, rationale, philosophy, principles, goals, scope of co in India, community organization models:
Week-6	J.Rothman, social planning, locality development and social action, Murray Ross-general content, specific content and process objective.
Week-7	Process, Methods and Skills of Community of Organization; Analysis, study, assessment, discussions, organization, action, evaluation, modification, continuation,
Week-8	skills of CO worker - communication, training, consultation, organizing, enabling, facilitating, public relations, mobilizing, participatory skills, liasoning Methods:
Week-9	Awareness creation, Campaigns, Public Meetings, Trainings, Education, Community Action -legislative and non legislative actions.
Week-10	Social Action as a Method of Social Work: Definition and meaning; aims and objectives, scope, social action as a method in Social Work, paradigm of five elements:
Week-11	causes, change agent, change target, change channels, change strategy; strategies and tactics for social action: channels topology, influence channels, responsive channels;
Week-12	strategies, power, persuasive, re-educative, reform and political change strategies; social worker as an activist, role and personality requirements; skills of a social activist - mediation, advocacy, negotiation, conflict-resolution
Week-13	Models and Approaches to Social Action: Introduction to Models of Social Action- Paulo Freire- Pedagogy of the oppressed,

Week-14	Gandhi- Rural Reconstruction, Martin Luther King-Civil Rights Movement, Saul Alinsky- Radical Movement, Gene Sharp- Nonviolence revolutionary Movement;
Week-15	Introduction to Social Action Movements in India - Tribal Movements), Dalit Movements; Participatory methods and assessment-tools and techniques. Recording in CO & SA

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG DEPARTMENT OF SOCIAL WORK
LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: MSW

COURSE CODE: 22PBSWC2

COURSE NAME: SOCIAL WORK RESEARCH & STATISTICS

SEMESTER NO: II

STAFF NAME : E. NESAMANI RAHEL JENIFER

WEEK	TOPICS TO BE COVERED
Week-1	Social Research and Social Work Research: Basic elements of scientific method; Social Work Research – definition, objectives, scope and limitations; Ethics in Social Work research;
Week-2	Scientific Enquiry – Science meaning, assumption, science and the study of social phenomena. Types of Research: Quantitative, Qualitative and Triangulation;
Week-3	Planning a research project: problem formulation, framing objectives, defining concepts, use of theorization in review of literature, Variables: definition and function and types;
Week-4	assumptions Hypotheses: Meaning, importance, uses and requirements, Testing of Hypotheses, types of hypotheses
Week-5	Research Design and Sampling: Definition and Functions; Types of Designs: Survey, Case Study, Exploratory, Descriptive, Explanatory,
Week-6	Experimental, Evaluative, Single case evaluation, Census Study, Ex-Post Facto, Action and Participatory Designs; Applications and Limitations of various designs;
Week-7	Sampling Methods -Definition, sample& population, Probability and Non-Probability Sampling: Sampling Error
Week-8	Methods and Tools of Collecting Data: source & types of data: primary and secondary, qualitative and quantitative data and their limitations.
Week-9	Methods of data collection: Observation: structured and non structured; participant and non participant; Interview schedule, Interview guide, Questionnaire, Scaling techniques and types; reliability and validity of tools;
Week-10	factors affecting reliability, methods of determining reliability, Validity, types, data processing, manual and computerized data presentation; editing, coding, preparation of master sheet, tabulation and interpretation, report writing; research abstracts
Week-11	Overview of Qualitative Research; Nature of qualitative research, assumptions, characteristics, tools of data collection – key informant,
Week-12	focus group discussion, participatory and rapid appraisal techniques; process of qualitative research, case analysis, social histories.
Week-13	Application of Statistics in Social Work: processing of Data: content checking, editing, classification, coding, tabulation, manual analysis, interpretation and computer application (SPSS).

Week-14	Normal Distribution, Characteristics, Levels of Measurement, Measures of Central Tendency and their uses, Measures of Dispersion;
Week-15	use of graphs, Tests of significance, Hypothesis Testing, Type I and II error; Level of Confidence, Degrees of Freedom, Chi Square and t-Test; Measures of Correlation.

Subject-in-Charge

HOD

**Dr. AMBEDKAR GOVERNEMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 600039
PG DEPARTMENT OF SOCIAL WORK**

**LESSON PLAN
ACADEMIC YEAR- 2022-2023 (ODD SEMESTER)**

DEGREE: MSW

COURSE CODE: 22PBSWE1B

COURSE NAME: COUNSELING THEORY AND PRACTICE

SEMESTER NO: II

STAFF NAME : E. NESAMANI RAHEL JENIFER

WEEK	TOPICS TO BE COVERED
Week-1	Concept of Counselling: Definition, principles and goals; factors influencing counselling process;
Week-2	Counsellor as a professional: attitudes, values, beliefs, relationship, burn-out stress management, self-renewal. Client as a person:
Week-3	voluntary and non – voluntary client, expectations, client's behaviour
Week-4	Different Approaches of Counselling; Approaches: Over view of alternate approaches: yoga, meditation,
Week-5	storytelling, art therapy, psychodrama, medical clowning, laughter therapy, movement therapy. Need for Eclectic approach to counselling
Week-6	Types and Techniques to Counselling; Types: directive counselling, non-directive counselling, individual counselling, group counselling, community counselling, peer counselling. Counselling Techniques:
Week-7	Initiating contact, intake, rapport building, establishing structure, interaction, attending behaviour, observation and responding, SOLER
Week-8	The Eagan Model of Counselling: Stage- 1: Problem exploration and clarification
Week-9	Part I – Attending & listening, orienting oneself to the present, Micro skills- active listening- verbal and non-verbal messages and behaviour;
Week-10	Part II – Helper's response and clients self-exploration, Helper's skills- accurate empathy (primary level), respect, genuineness, concreteness, Clients' skills – self exploration
Week-11	Stage- 2: Integrative understanding/ dynamic self-understanding, Part I- focusing, summarizing, probing for missing experiences, behaviour feelings.
Week-12	Part II- Helper's skills- skills of stage-1, self-disclosure, immediacy, confrontation, Client's skill - non-defensive listening, dynamic self-understanding

Week-13	Stage- 3: Facilitating action; developing new perspective; preferred scenario, Part I - helping clients see alternatives; choose and formulate action plan; implement and evaluate
Week-14	Counselling in different settings: Marital, family, HIV/AIDS, pastoral counselling, student guidance and counselling,
Week-15	career guidance and grief counselling, counselling suicidal clients, Gerontological counselling, adolescent counselling, de-addiction counselling and disaster counselling

Subject-in-Charge

HOD

DEPARTMENT OF SOCIAL WORK
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
MSW

Teaching Plan (ODD- Semester (2022-23))

Class : MSW

Semester: II

Subject Code: 22PBSWD2

Subject Name: SOCIAL ETHICS AND VALUES

Subject In Charge: E. NESAMANI RAHEL JENIFER

Week	Topics to be Covered
Week-1	General Introduction on Social Ethics and Values: Concept & Meaning of Social Ethics and social values.
Week-2	Social ethics and values in different setting of social work
Week-3	Social Ethics, Gender & Values: Gender Equality is an essential Precursor to social progress.
Week-4	Gender and Society – women, Men and LGBTQ issues in relation with ethics and values
Week-5	(Pre natal selection, Gendered Practice in the family, Marriage, Divorce and remarriage. Child marriage. Patriarchy and feminist issues.
Week-6	Gender sensitive Language, working women and rights Surrogacy)
Week-7	Values and Good Citizenship: Constitutional values – duties and qualities of Good citizenship, Patriotic towards the country.
Week-8	Juvenile issues, Crime against Human fraternity, Honor killing, Communal Violence and imparting values in children.
Week-9	Environment & Bio Ethics: Types of Ecological and Environmental Values, role of individual in conserving the environment;
Week-10	Bio ethics genetic manipulation in plants and animals for the benefit of the society and cruelty of animals.
Week-11	Promotion of Green Technology: Goal of Green Technology –Reduce, Recycle and Renewable;
Week-12	ethics and use of Digital Technology – Cyber ethics, Crimes and Ethical Hacking. Ethics of Social Media.
Week-13	Education and Ethics: Institutions and the issues with Teachers and Students; Challenges of Ethical practices in Higher Education institutions;
Week-14	Ragging, Suicide, Abuse and need for the counseling, plagiarism, Violation of intellectual property rights;
Week-15	Community life in campus; staff student positive friendship. Quality of delivery.

Subject-in-Charge

HOD

DEPARTMENT OF SOCIAL WORK
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
MSW

Teaching Plan (ODD- Semester (2022-23))

Class : MSW

Subject Name: RURAL COMMUNITY DEVELOPMENT

Subject Code: 22PCSWC1A

Semester : III

Subject In Charge: E. NESAMANI RAHEL JENIFER

Week	Topics to be Covered
Week-1	Rural Community: Definition, types, characteristics, power structure; rural community issues: caste, rural poverty & indebtedness, land related issues:
Week-2	Systems of land tenure, Land reforms, Land alienation, landlessness. Agrarian Movements & Struggles, problems of agriculture laborer, marginal and small farmers.
Week-3	Agro-based industries, rural marketing, urbanization, Industrialization, Globalization, migration and consequent social erosion
Week-4	Historical Development: post and pre independent development: (Sriniketan, Marthandom, Guragon). Probation trial period (Baroda, Etawah, Nilohkeri and Firka).
Week-5	Five Year Plans and rural development; Critique of National and State Rural development programmes and policies Mahatma Gandhi National Rural Employment Guarantee Act, 2005.
Week-6	PM Awaz Yojana, PURA, Pradhan Mantri Gramodaya Yojana, NRHM (National Rural Health Mission) Schemes based on Agriculture sector: rural roads: Bharatmalapariyojana, NRLM; NLM; TNSRLM; PM Krishi sichai yojana;
Week-7	Rural Community Development: Definition, scope, objectives, philosophy. Approaches- spatial planning approach, Multipurpose approach,
Week-8	Area development approach, Integrated approach, Multi District planning approach, Target sector approach, Gandhian constructive approach.
Week-9	Processes: Identifying leaders, resources mobilization, activating and mobilizing people, organizing and working with groups, influencing, and lobbying, facilitating, negotiating, cooperation.
Week-10	Rural Administration: Rural Development Administration: Organization and administration of rural development from block to National level.
Week-11	Components of block administration, development programmes and their coordination. Functions of BDO and other functionaries. Training for community development functionaries.
Week-12	State Institute of Rural Development (SIRD) and National Institute of Rural Development (NIRD) Ministry of Rural Development and panchayat raj.
Week-13	Rural Governance: Grama Sabha – Importance of Grama sabha and its functions;
Week-14	Panchayat systems and local self-government in ancient India, Balwantrai Mehta and Ashok Mehta Committee reports.
Week-15	Three-tier system, administrative set up and functions, finance and problems of Panchyati Raj, Tamil Nadu Panchayati Raj Act, 1994 and the 73 rd amendment and its implications.

Subject-in-Charge

HOD

DEPARTMENT OF SOCIAL WORK
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
MSW
Teaching Plan (ODD- Semester (2022-23))

Class : MSW

Semester : III

Subject Code: 22PCSWC1B

Subject Name: MEDICAL SOCIAL WORK

Subject In Charge: E. NESAMANI RAHEL JENIFER

Week	Topics to be Covered
Week-1	Introduction to Medical Social Work: Medical social work concept, definition and scope, Historical Development in Medical Social Work in India. Trends in Medical Social Work Practice,
Week-2	Changing phase of Health care: health care models – preventive, promotive, integrative, development and holistic;
Week-3	Alternative system of health- AYUSH, Yoga, meditation and naturopathy; concept of stem cell therapy – ethics and its relevance.
Week-4	Concept of Health: Indicators of Health- Determinants of Health Services – The right to Health services- Major Health problems in India with specific reference to adolescents and youth
Week-5	Factors responsible for the prevalence of major diseases- Communicable diseases and Non communicable diseases- Control and prevention of communicable diseases- General measures to control diseases.
Week-6	Health Education: Concept, principles, techniques and methods: social action, empowerment, lobbying, advocacy and public relations in hospital.
Week-7	International Health Agencies: Health services in India - Government health services and Private health services – Urban health services and Rural health services - Effectiveness of health care services.
Week-8	The role of Medical Social Worker in various health settings. Working with the aged and differently abled groups. Health problems in different sectors:
Week-9	Occupational, Women's, Pediatric, Geriatric, problems of individuals and family during hospitalization and patients undergone surgery.
Week-10	Organization and administration of Medical Social Work: Departments in hospital, medical social work in relation to different disciplines,
Week-11	multidisciplinary approach and team work, patients rights in health care – PNDT Act, MTP Act, COPRA,
Week-12	Organ Transplantation Act, person with Disability Act(1995), Euthanasia, ESI Scheme, Health Insurance
Week-13	Medical Social work Practice in different Settings: Hospitals- out patients department, emergency/crisis care, ART Centers.
Week-14	Hospice and palliative, special clinics and community health use of volunteers, social support and self help groups, convalescent care, acute health care settings, restorative

	health care settings, Long term health care.
Week-15	Role of Medical worker in medical settings – applications of social work methods in the field of health discharge planning – documentation and record keeping in health care, problems encountered by medical social workers in the field

Subject-in-Charge

HOD

DEPARTMENT OF SOCIAL WORK
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
MSW

Teaching Plan (ODD- Semester (2022-23))

Class : MSW

Semester:III

Subject Code: 22PCSWC2A Subject Name: URBAN COMMUNITY DEVELOPMENT

Subject In Charge: E. NESAMANI RAHEL JENIFER

Week	Topics to be Covered
Week-1	Basic Concepts: Concept of Urban, Urban Development, Urban Community Development, Urbanization.
Week-2	Urbanism, Differences between urban development and Urban Community Development.
Week-3	Principles and Approaches of UCD. Urban Poor Habitat: Definition, characteristics, types,
Week-4	causes and consequences of growth of urban poor Habitats. Theory of slums, Power structure of Slums. The Tamil Nadu Slum Areas (Slum Clearance and Improvement) Act, 1971 – Policies
Week-5	structure and functions of the Tamil Nadu Urban Habitat Development Board, Problems of slum dwellers, squatter settlement dwellers,
Week-6	street children. – Programmes for the development of slum dwellers. Critical analysis of the Programmes and approaches.
Week-7	Delhi and Hyderabad projects – Urban Community Development in Tamil Nadu – TNUDP; Urban waste Management;
Week-8	Governmental agencies in Urban Community Development – structure and functions of the Tamil Nadu Housing Board, HUDCO
Week-9	Corporation of Chennai, CMDA – Non-Governmental agencies in Urban Community Development. Urban infrastructure: Smart city project, Metro Rail Connections; JNNURM
Week-10	concept of involvement – importance and scope of people's participation
Week-11	factors hindering promoting people's participation.
Week-12	factors hindering promoting people's participation.
Week-13	Role of Community Development worker in UCD;
Week-14	goal settings; identifying and developing leadership, resource mobilization; human resource development resolving group conflicts, programme planning and service delivery,
Week-15	eliciting people's participation, monitoring and evaluation. Rehabilitation & Resettlement: concept, Resettlement policies 2007; Right to fair compensation and Transparency in land Acquisition act 2013;

Subject-in-Charge

HOD

DEPARTMENT OF SOCIAL WORK
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
B.Sc.,Degree Programme in Computer Science
Teaching Plan (EVEN- Semester (2022-23))

Class : MSW

Semester:III

Subject Code: 22PCSWC2B

Subject Name: MENTAL HEALTH SOCIAL WORK

Subject In Charge: E. NESAMANI RAHEL JENIFER

Week	Topics to be Covered
Week-1	psychiatric social work – definition, history, scope, and changing perspectives of psychiatric social work.
Week-2	Changing perspectives from illness to well – being. Misconceptions about mental illnesses;
Week-3	Case history taking and mental status examination
Week-4	psycho social and multi dimensional assessment of person with mental disorders in psychiatric social work practice.
Week-5	Assessment of family as a system, use of Scales in mental health assessments and intervention
Week-6	Psychoanalytical, Psychosocial, Transactional Analysis, Life model, Family Centered Treatment, Task Centered, Crisis Intervention, Behavior Modification, Cognitive therapy,
Week-7	Strength Based/ Resilience Model, Evidence Based practice. Application of social work methods and other related techniques in the field - Occupational therapy, play therapy
Week-8	Electro convulsive therapy - Multidisciplinary approach and team work in mental health care - Preparing the family and community for the return of the affected individual, follow-up.
Week-9	Psychiatric Settings: Child and Adolescent Mental Health, Gender and Mental Health, De – Addiction
Week-10	Industry, Emergency Settings; Non – Psychiatric settings:- Non – institutional model of Mental Health care,
Week-11	Role of National and International Organizations in Mental Health,
Week-12	Psycho- Social Rehabilitation – concept, principles, processes and programs.
Week-13	Mental Health Act 1987, Narcotics Drugs and Psychotropic substances Act 1987,
Week-14	Rights of the Mentally ill and Advocacy
Week-15	Role of National and International organizations in Mental Health

Subject-in-Charge

HOD

DEPARTMENT OF SOCIAL WORK
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
MSW

Teaching Plan (EVEN- Semester (2022-23))

Class : MSW

Semester:III

Subject Code: 22PCSWC3

Subject Name: SOCIAL WORK ADMINISTRATION &

SOCIAL LEGISLATION

Subject In Charge: E. NESAMANI RAHEL JENIFER

Week	Topics to be Covered
Week-1	Social Services / Welfare Organizations: A Historical perspective, Role of Voluntary Organisations, National Policy on Voluntary Sector, 2005, National Policy on the Voluntary Sector – 2007,
Week-2	Development and welfare organizations response to societal needs, roles of State, Voluntary and corporate sector; Scope of Scientific Management in Welfare Organisations; Types of Non-Profit Organisations - NGO, INGOs, Quasi Government and Transnational NGOs;
Week-3	Society's Registration Act 1860, Companies Act 2013, Trust Act of 1912, Co-operative Societies Act 1912. FCRA related issues, FEMA (Foreign Exchange Management Act, 1999)
Week-4	Professional Management of NGO's – Professional Management Techniques and Methods used by NGO's. Methods of adopting the new projects; methods of techniques of minutes taking;
Week-5	Project Management – Concept of Project and Project Cycle Management, Professional Management Techniques for project planning, Scheduling Monitoring and Evaluation.
Week-6	Logical Framework Analysis, Cost–Benefit Analysis, Programmed Evaluation and Review Technique (PERT),Critical Path Method (CPM), SWOT Analysis, Management Information System (MIS).
Week-7	Use of computers for NGO management. Project report& Project Proposal Writing
Week-8	Social Policy and Constitution; Social policy, social welfare policy, its relation to the constitution, fundamental rights
Week-9	Directive Principles of State Policy and Human Rights. Definition, needs and contents, evolution of social policy in India,
Week-10	social policy and planned social change and development.
Week-11	Policy Formulation approaches to social policy, unified, integrated and sectoral; models of social policy and their application to Indian situation, process of formulation, social policies, plans and programmes,
Week-12	policies in India – a historical perspective- policies- backward classes, scheduled classes. scheduled tribes, de -notified communities, women, children, youth, handicapped, aged, populations, family welfare, urban & rural development,
Week-13	education, health, poverty alleviation, Review of Five year Plans, Programmes and policies of Twelfth (12) Five Year Plan. NITI Aayag.
Week-14	Special Marriage Act, 1954, Provision regarding marriage and divorce in Mohammedan law. Legislation pertaining to children: Child Labour (abolition & regulation) Act 1986. Juvenile Justice Act 2001.

Week-15	Legislations: Protection of Civil Rights Act (1976)., SC/ST. Prevention of Atrocities Act, 1989. Dowry Prohibition Act (1961) Immoral Traffic Prevention Act (1956) Tamil Nadu Slum Areas (Improvement and Clearance) Act (1971) . Manual Scavenging and Dry Latrines (prohibition) Act 1993, Bonded Labour Abolition Act 1976, Transplant of Human Organs Act 1994, Family Court's Act 1984, Protection of Human Rights Act, 1993, Protection of Disability Rights Act 2017
----------------	---

Subject-in-Charge

HOD

DEPARTMENT OF SOCIAL WORK
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-600039
MSW
Teaching Plan (EVEN- Semester (2022-23))

Class : MSW

Semester:III

Subject Code: 22PCSWE2B Subject Name: SOCIAL ENTREPRENEURSHIP

Subject In Charge: E. NESAMANI RAHEL JENIFER

Week	Topics to be Covered
Week-1	Need and importance of Third Sector in development. Typologies of third sector –Voluntary, NGO, NPO, CBO, CSO,
Week-2	Growth of third sector in India –Performance and environment of third sector. Third sector relationship to state and civil society
Week-3	Social entrepreneurship Vs business entrepreneurship –social entrepreneurs and social change
Week-4	qualities and traits of social entrepreneurs. Indian social entrepreneurs – M.S. Swaminathan,
Week-5	VargheaseKurien and JockinArputham
Week-6	similarities and differences between social enterprises and nonprofits
Week-7	types of social enterprises. Selected case studies of Indian Social Enterprises
Week-8	Global & National environment to promote social enterprises and social entrepreneurship. Financial Management of social enterprises –Corporate, Community and government support for social enterprises.
Week-9	Agencies Related to MSME: Directorate of Entrepreneurship, TN Skill Development Corporation, NSDC
Week-10	Ministry of Skill development and Entrepreneurship,
Week-11	NSQF – National Skills Qualification Framework,
Week-12	Schemes under Skill Development – MUDRA Scheme.
Week-13	PM Youth Employment Guarantee Scheme
Week-14	Application of marketing principles in welfare and development field – Social marketing. Social Entrepreneurship
Week-15	field of Health, Education, Environment protection, Energy consumption and Human rights

Subject-in-Charge

HOD

DEPARTMENT OF SOCIAL WORK
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
PG DEPARTMENT OF SOCIAL WORK
TEACHING PLAN –ODDSEMESTER (2022-2023)

Class : MSW

Semester:III

Subject Code: 22PCSWD3

Subject Name: DISABILITY EMPOWERMENT

Subject In Charge: E. NESAMANI RAHEL JENIFER

WEEK	TOPIC TO BE COVERED
WEEK 1	Introduction to Disability (Divyangjan) social work
WEEK 2	Concept, definition of Disability.
WEEK3	Types of Disability
WEEK4	Historical overview of disability rehabilitation-international
WEEK5	National contexts Disability Rights Movement
WEEK 6	Social Inclusion and Exclusion: Exclusion, Discrimination, Alienation and oppression;
WEEK 7	The Medical model- pathology and strength/resilience; Central & State Government Schemes for welfare of the Disabled.
WEEK 8	Understanding the social construction of: Disablism, sexism, racism, casteism, classism and ageism.
WEEK 9	Concepts of Role, learned helplessness, stress and coping in crisis, diversity and difference and Human Rights entitlements.
WEEK 10	Wider Theoretical Perspectives: Human rights perspective Paulo Freire and conscientization
WEEK 11	Towards building disability rehabilitation social work practice: From medical to social model (pathology and strength/resilience as social constructs)
WEEK 12	Towards client worker partnership (role of power inequality, locus of control and manipulation in the relationship),
WEEK 13	Community Based Rehabilitation – Goal, Role, Interventions, Services, Process.
WEEK 14	Disable Centric Method, Rights Based Method; Social Inclusion Method, Social Welfare, and Legal Method
WEEK 15	National & International organizations working for Disability empowerment

Subject-in-Charge

HOD

DEPARTMENT OF SOCIAL WORK
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
MSW

TEACHING PLAN –EVENSEMESTER (2022-2023)

Class : MSW

Semester:III

Subject Code: 22PDSWC1B

Subject Name: MENTAL DISORDERS

Subject In Charge: E. NESAMANI RAHEL JENIFER

WEEK	TOPIC TO BE COVERED
WEEK 1	Psychiatric Social Work: Definition, Objectives
WEEK 2	Concept of ICD 10 and DCM
WEEK3	Mental Health Disorders: Concept. Definition of Mental Health
WEEK4	MH Disorder Mental Retardation, Suicide, Epilepsy
WEEK5	Mental Disorders:Anxiety Disorders (Panic, Phobias, Obsessive-Compulsive
WEEK 6	PTSD and Generalized Anxiety) -Symptoms and Differential Diagnoses
WEEK 7	Personality Disorders -Symptoms and Differential Diagnoses
WEEK 8	Mood Disorders: (Bipolar, Dysthymia, Depression.)
WEEK 9	Symptoms and Differential Diagnoses. Alcohol & other drug-induced Affect/Mood Problems
WEEK 10	Schizophrenia & Other Psychotic Disorders Symptoms and Differential Diagnoses Dual focus for assessing & treating AODA clients with these co-occurring disorders.
WEEK 11	Adjustment Disorder, Childhood Disorders Symptoms and Differential Diagnoses.
WEEK 12	Eating Disorders (Anorexia, Bulimia, Compulsive Over-Eating) Symptoms and Differential Diagnoses.
WEEK 13	Sexual & Gender Identity Issues Symptoms and Differential Diagnoses. Issues in assessing/treating AODA clients with these co-occurring disorders Culture bound Syndrome
WEEK 14	Mental Health Models and Theories: Models: Behavioral, Biological, Psychodynamic, Cognitive and Humanistic. Theories: Self-determination Theory of motivation (SDT), the Basic Psychological Needs Theory (BPNT
WEEK 15	The primary supports for well-being and optimal functioning (SDT), The PERMA Theory of well-being

Subject-in-Charge

HOD

**DEPARTMENT OF SOCIAL WORK
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI**

MSW

TEACHING PLAN –ODDSEMESTER (2022-2023)

Class : MSW

Semester:III

Subject Code: 22PDSWC2A

Subject Name: Indigenous Community and

Tribal Development

Subject In Charge: E. NESAMANI RAHEL JENIFER

WEEK	TOPIC TO BE COVERED
WEEK 1	Meaning and Categorization of tribes: Primitive, Tribe, Adivasi, Varnavasi, Scheduled Tribe, De-notified tribe, Indigenous people.
WEEK 2	Concept of tribe from various perspectives – British perspective, Indian Perspective, tribals own perspective.
WEEK3	Distribution of Scheduled tribe in India: Racial, Linguistic and geographical
WEEK4	Constitutional Meaning of tribe. Tribal family, marriage, kinship, Yuvagruh, Religion, and customary practices.
WEEK5	Forest Regulation and Policy, Tribal culture and political organization . Tribal policy in India, Forest-tribe interaction, Deforestation and its impact on tribal population
WEEK 6	Tribal rights on forest and land, Problems of indebtedness & land alienation among tribals, Role of State and NGOs to protect and promote the tribals.
WEEK 7	Food gathers and hunters, shifting cultivators, Nomads, peasants and settled agriculture, Artisans, Changing patterns of subsistence and seasonal migrant workers.
WEEK 8	The so-called mega development and their impact on tribal communities, Sustainable tribal development, Structural constraints to tribal education, (Case of Ashram schools) Tribal India in Transition Acculturation,
WEEK 9	religious conversions, transition in education, health, economy, polity and gender dimensions.
WEEK 10	Culture through ethnographies: The Toda, Gara, Khasi, Muria, Kond. Component of tribal culture: Dance, Drama, Folklore, dialect, Instruments. Religion, customs & Rituals, Literature and Art, Life philosophy in cultural practices.
WEEK 11	Tribal Transformation: Tribe-caste Continuum Detribalization, ‘Sanskritization’ and Religions conversions, ‘retribalization’ Assertion of tribal identity, revitalisation
WEEK 12	Cultural invasion and culture of silence Cultural synthesis, Cultural action for tribal freedom, Cultural hegemony
WEEK 13	Tribal Welfare Policies: Changing approaches to Tribal Development pre and post-independence, constitutional safe guards, contemporary Tribal development programs
WEEK 14	Neheru’s perspectives on tribal development, Segregation,
WEEK 15	assimilation and integration policies, Sub-plan approach for tribal development, Tribal council, customary laws and practices

Subject-in-Charge

HOD

DEPARTMENT OF SOCIAL WORK
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
MSW TEACHING PLAN –EVEN SEMESTER (2022-2023)

Class : MSW

Semester:III

Subject Code: 22PDSWC2B

Subject Name: **COMMUNITY HEALTH**

Subject In Charge: E. NESAMANI RAHEL JENIFER

WEEK	TOPIC TO BE COVERED
WEEK 1	Community Health: concept and definition of Community Health , community mental health; Public Health – concept and development in India: organization and administration of health care at the center
WEEK 2	state, District, Municipality and village level; health planning in India; Health communities
WEEK3	Community Health Care: changing concepts; Primary Health Care for all; Health status and health problems; health care systems;
WEEK4	role of professional social worker in community health. Community based Rehabilitation; impact of globalization, liberalization and privatization on health
WEEK5	ESI Act,1948, Amendment, 1975. MTP Act, 1971, Doctors patients and the consumer protection act, 1986
WEEK 6	Perosn with Disability act,1995; Environment protection Act, National Health Policy, 2017. The population policy, 2000. Trade and Intellectual Property Rights, Medical Tourism. Commercialization of Health care.
WEEK 7	Right to Health, Right to Health care and essential medicines. Current challenges in attaining health for all; Role of Peoples Health movement;
WEEK 8	Rehabilitation Council of India Act, National Trust for Welfare of person with Autism, Cerebral palsy, Mental Retardation and Multiple Disabilities Act 1999
WEEK 9	National Health Programmes: Family welfare, Maternal & Child Health, ICDS, & School health programmes; Health Sector Reform- NHRM, UIP, NEMP, NLEP, NTP,IPHS, Diarrheal disease control programme: IDD;
WEEK 10	AIDS Control programme; National programme for control blindness; Health programmes in the planning commission of India. Welfare for the physically challenged; International and national Institutions:
WEEK 11	Roles, Structure and functions of Ministry of Social justice and empowerment, State Commission for the disabled,
WEEK 12	Rehabilitation council of India, National institute for mental and Neuro sciences. WHO, UNICEF, Red Cross,
WEEK 13	clinical and Non-Clinical Skills for Community Health and Mental Health Practices: Approaches for Promotion of Health at all levels – Pro – Active, Preventive
WEEK 14	Developmental and Remedial Approaches
WEEK 15	National Mental Health Programmes; Research applications in health sources – Epidemiological and vital statistics; Role of ICMR in health research.

Subject-in-Charge

HOD

DEPARTMENT OF SOCIAL WORK
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
MSW MTEACHING PLAN –EVEN SEMESTER (2022-2023)

Class : MSW

Semester:III

Subject Code 22PDSWE3A

Subject Name: SOCIAL WORK FOR PEOPLE LIVING WITH HIV/AIDS

Subject In Charge: E. NESAMANI RAHEL JENIFER

WEEK	TOPIC TO BE COVERED
WEEK 1	Introduction to sexually Transmitted Diseases, Epidemiology of HIV/ AIDS Situation in India and developed countries.
WEEK 2	Approach to patients with suspected HIV infection. Pre test and post Test Counseling.
WEEK3	Target Group - Sex Workers, MSM, Truck drivers, IDU (intra venous drug abuse) street children
WEEK4	Skin diseases, Cancer, Herpse, STD, Liver disorders,
WEEK5	Steroids and medical complications.
WEEK 6	Social Work Approach to people living with HIV infection:.,
WEEK 7	systematic approach – Trust, Confidence,
WEEK 8	Confidentiality and case work processes.
WEEK 9	Preventive methods: awareness raising, sex education, peer influence,
WEEK 10	demythologising HIV/ AIDS and use of condoms
WEEK 11	Government and Non GovernmentProgrammes
WEEK 12	National AIDS Control Programme (NACP) and the role of NGOs
WEEK 13	networking, social support systems, Counseling the family,
WEEK 14	community health programmes, TANSACS
WEEK 15	Supportive groups, positive women Network.

Subject-in-Charge

HOD

DEPARTMENT OF SOCIAL WORK
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI

MSW TEACHING PLAN –EVEN SEMESTER (2022-2023)

CLASS : MSW–I YEAR-SEMESTER II

SUBJECT CODE:22PBSBE2

SUBJECT NAME: LEADERSHIP AND COMMUNICATION SKILLS

SUBJECT IN-CHARGE: E. NESAMANI RAHEL JENIFER

WEEK	TOPIC TO BE COVERED
WEEK 1	Leadership – Nature, Characteristics or Features of leadership – Objectives of leadership Functions or Role of a leader – Qualities of a good leader – skills of a leader
WEEK 2	Functions or Role of a leader – Qualities of a good leader – skills of a leader
WEEK3	Leader Vs. Manager – Leadership and management.
WEEK4	Leadership styles – Autocratic leadership
WEEK5	Democratic leadership – Laissez-Faire leadership or Free Rein leadership
WEEK 6	Bureaucratic leadership style – Supportive leadership – Charismatic leaders
WEEK 7	Communication – Elements of Communication – Process of Communication
WEEK 8	Essentials of Communication – Functions of Communication – Features of communication
WEEK 9	Benefits of Communication – Principles of effective communication
WEEK 10	Methods or types of communication – Formal communication – merits and demerits
WEEK 11	Informal communication or Grapevine – merits and demerits – Rumour – Reasons for spread of rumours
WEEK 12	Negative impact of rumours – Methods to deal with rumours – Formal Vs. informal communication
WEEK 13	Oral communication – written communication – downward communication – upward communication
WEEK 14	– Horizontal communication – Types of communication networks.
WEEK 15	Barriers to communication – Steps to overcome barriers to communication.

Subject-in-Charge

HOD

DEPARTMENT OF SOCIAL WORK
DR.AMBEDKAR GOVERNMENT ARTS COLLEGE, VYSARPADI
MSW TEACHING PLAN –EVEN SEMESTER (2022-2023)

DEGREE: MSW

COURSE CODE: 22PASBE1

COURSE NAME: SBE I: EMPLOYABILITY SKILLS

SEMESTER NO: 1

STAFF NAME: E.NESAMANI RAHEL JENIFER

WEEK	TOPICS TO BE COVERED
Week-1	Introduce yourself and introduce a topic.
Week-2	Answering questions and individual presentation practices.
Week-3	Creation of effective power point presentations to present the visuals effectively.
Week-4	Usage of body language in professional contexts.
Week-5	Gestures and facial expressions.
Week-6	Preparation of covering letter and resume for applying jobs.
Week-7	Applying for jobs online: - E-Mail – job portals.
Week-8	Participating in group discussions – understanding group dynamics -
Week-9	Brainstorming the topic.
Week-10	Persuasive skills and People skills.
Week-11	Questioning and clarifying skills
Week-12	Conducting mock GD in any topic.
Week-13	Attending job interviews: Answering questions confidently.
Week-14	Interview etiquette – dress code – body language.
Week-15	Mock interview.

Subject-in-Charge

HOD

2.3.4 TEACHING PLAN

DEPARTMENT OF PHYSICS

Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai

39

B.Sc., Degree Programme in Physics TEACHING PLAN (ODD SEMESTER)

Class : B.Sc., Physics E/M and T/M -- I Year Semester -- I

Subject Code : 19APHC1

Name of the Subject: MECHANICS AND PROPERTIES OF MATTER

Subject-in-charge: Dr. N. Mani and Dr. D. Subashini

WEEK	TOPICS TO BE COVERED
Week 1	Impulse – impact – Laws of impact – direct impact and oblique impact between two smooth spheres
Week 2	loss of kinetic energy – motion of two interacting bodies – reduced mass. Compound pendulum – theory – determination of g and k
Week 3	center of mass – velocity and acceleration of centre of mass – determination of motion of individual particle – system of variable mass.
Week 4	Centre of gravity of solid and hollow tetrahedron, solid and hollow hemisphere –
Week 5	Centre of pressure – vertical rectangular lamina – vertical triangular lamina. Equation of continuity of flow – Venturimeter
Week 6	– Euler’s equation of unidirectional flow – Torricelli’s theorem – Bernoulli’s theorem and its applications.
Week 7	Hooke’s Law – Stress – Strain - Elastic constants – Expressions for Poisson’s ratio in terms of elastic constants
Week 8	workdone in stretching and twisting a wire – rigidity modulus by static torsion
Week 9	torsional pendulum – rigidity modulus and moment of inertia.
Week 10	Cantilever – expression for bending moment – Experiment to find Young’s modulus – Non uniform bending –
Week 11	Experiment to determine Young’s modulus by Koenig’s method – uniform bending –
Week 12	expression for elevation – experiment to determine Young’s modulus using microscope.
Week 13	Surface tension-Definition – Excess of pressure over curved surface – Application to spherical and cylindrical drops and bubbles
Week 14	– variation of surface tension with temperature – Jaeger’s method.

Week 15	Viscosity-Definition – Coefficient of viscosity – Rate of flow of liquid in a capillary tube – Poiseuille's formula
---------	---

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (ODD SEMESTER)

Class : B.Sc., Physics E/M and T/M -- II Year Semester -- III

Subject Code : 19UCPHC1

Name of the Subject: OPTICS AND SPECTROSCOPY

Subject-in-charge: Dr. T. HEMA THANKA CHRISTLET and Mrs. P. R. KANIMOZHI

WEEK	TOPICS TO BE COVERED
Week 1	Spherical aberration in lenses - methods of minimizing spherical aberration - condition for minimum spherical aberration in the case of two lenses separated by a distance -
Week 2	Chromatic aberration in lenses - Condition for achromatism of two thin lenses (in and out of contact) -
Week 3	Dispersion produced by a thin prism - Combination of prisms to produce - Dispersion without deviation - Deviation without dispersion.
Week 4	Analytical treatment of interference - expression for intensity - condition for maxima and minima in terms of phase and path difference
Week 5	- Airwedge - determination of diameter of thin wire - Michelson's interferometer - theory - -
Week 6	applications - determination of wavelength; thickness of thin transparent material and resolution of interferometer.
Week 7	Fresnel diffraction - diffraction at a circular aperture and narrow wire. Fraunhofer diffraction - single slit - double slit - (simple theory).
Week 8	Plane diffraction grating - Determination of wavelengths using grating - normal incidence - oblique incidence (theory).
Week 9	Dispersive power of a grating. Resolving power of grating - Difference between resolving power and Dispersive power.
Week 10	Double refraction - Nicol prisms - polarizer and analyzer - Huygen's explanation of double refraction in uniaxial crystals -
Week 11	Quarter wave plate and Halfwave plate - plane, elliptically and circularly polarized light - production and detection -
Week 12	optical Activity - Fresnel's explanation of optical activity - specific rotatory power - determination using Laurent's half shade

	polarimeter.
Week 13	Introduction to spectroscopy - Electromagnetic spectrum – characteristics of electro magnetic radiation -
Week 14	quantization of energy - regions of the spectrum – classification of molecules – rigid rotator -
Week 15	vibrational spectroscopy – harmonic oscillator - Raman effect - experimental set up - Characteristics of Raman lines.

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (ODD SEMESTER)

Class : B.Sc., Physics E/M and T/M -- III Year Semester -- V

Subject Code : 19UEPHC1

Name of the Subject: **ELECTRICITY AND ELECTROMAGNETISM**

Subject-in-charge: Dr. S. SESHADRI and Dr. LYDIA CAROLINE MANOHAR

WEEK	TOPICS TO BE COVERED
Week 1	Magnetic flux and magnetic induction- BiotSavart law- magnetic induction at a point due to a straight conductor carrying current - magnetic induction at a point on the axis of a circular coil carrying current-
Week 2	amperes circuital law-magnetic field inside a long solenoid-Lorent's force on a moving charge- direction of force-torque on a current loop in a uniform magnetic field -
Week 3	Moving coil Ballistic galvanometer-theory -experiment to find charge sensitivity and absolute capacity of a capacitor
Week 4	Thermoelectricity- Seebeck effect- laws of thermo e.m.f-- measurement of thermo e.m.f using potentiometer-Peltier effect-demonstration—
Week 5	Thomson effect- demonstration - thermodynamics of thermo couple –thermo electric diagram –uses - Faradays laws of electrolysis- electrical conductivity of an electrolyte--
Week 6	specific conductivity- Kohlrausch's bridge method of determining the specific conductivity of an electrolyte -Arrhenius theory of electrolytic dissociation- Accumulators-lead accumulators-alkali accumulator-standard cadmium cell
Week 7	Faraday's laws of electromagnetic induction-self induction –self inductance of a long solenoid -
Week 8	mutual induction-mutual inductance between two co-axial solenoids-experimental determination of mutual inductance
Week 9	—coefficient of coupling - eddy currents-uses - Earth inductor-uses-search coil- induction coil and its uses
Week 10	Growth and decay of current in LC,LR and CR circuits with d.c.voltages - determination of high resistance by leakage – growth and decay of charge in LCR circuit-conditions for the discharge to be oscillatory –frequency of oscillation.
Week 11	Alternating Current-Resistance in an AC circuit-Inductance in an AC circuit- Capacitance in an AC circuit-AC through an

	inductance and resistance in series- capacitance and resistance in series –
Week 12	LCR series resonance circuit -sharpness of resonance-parallel resonance circuit -power in an AC circuit-power factor.
Week 13	Introduction- Maxwell's equations- -Displacement current
Week 14	- Poynting vector-Electromagnetic waves in free space-
Week 15	Hertz experiment for production and detection of EM waves.

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (ODD SEMESTER)

Class : B.Sc., Physics E/M and T/M -- III Year Semester -- V

Subject Code : 19UEPHC2

Name of the Subject: ANALOG AND DIGITAL ELECTRONICS

Subject-in-charge: Dr. D. Subashini and Mrs. P.R. Kanimozhi

WEEK	TOPICS TO BE COVERED
Week 1	PN junction theory - V-I characteristics of a PN junction diode - Zener diode - equivalent circuit
Week 2	- voltage regulator -Field effect Transistor FET-MOSFET-
Week 3	UJT-SCR -characteristics - FET as a VVR-UJT relaxation oscillator-SCR as a switch and rectifier
Week 4	Transistor - Different modes of operations-CB mode &CE mode-RC coupled amplifier – Emitter follower.
Week 5	Feedback principle -effect negative feedback-and Barkhausen criterion - Phase shift and Wien Bridge oscillators using transistors –
Week 6	Expression for frequency- Multivibrators-Astable, Monostable and Bistable multi vibrators using transistors - Schmitt trigger
Week 7	Operational Amplifier- characteristics-parameters-applications- Inverting amplifier - Non inverting amplifier -
Week 8	Adder - Subtractor - Integrator – Differentiator- Solving simultaneous equations-comparator -square wave generator -Wien bridge oscillator
Week 9	- 555 timer, block diagram & working-astable&monostablemultivibrator -Schmitt trigger
Week 10	Number Systems and Conversions -BCD Code - Gray code - 1's and 2's complements –
Week 11	Basic logic gates - NAND, NOR and EX-OR gates - NAND and NOR as Universal Building blocks - Laws and theorems of Boolean algebra -- NAND-NAND circuits -
Week 12	Karnaugh's map- SOP and POS- applications-Half adder-Full adder-Half subtractor-full subtractor.
Week 13	RS, Clocked RS, D, J-K and J-K Master-Slave Flip-flop

Week 14	- Shift registers and Counters- Multiplexers and Demultiplexers
Week 15	– Decoders and Encoders - Memory Circuits -D/A and A/D converters

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (ODD SEMESTER)

Class : B.Sc., Physics E/M and T/M -- III Year Semester -- V

Subject Code : 19UEPHC3

Name of the Subject: CLASSICAL AND STATISTICAL MECHANICS

Subject-in-charge: Dr. K. Srinivasan and Dr. S. Karthikeyan

WEEK	TOPICS TO BE COVERED
Week 1	External and internal forces, centre of mass-Conservation of linear momentum-Conservation of angular momentum-
Week 2	Conservation of energy-work-energy theorem-Conservative forces-examples-Constraints-Types of constraints-Examples-
Week 3	Degree of freedom-Generalized coordinates - transformation equations- Generalized velocities- Generalized Momentum.
Week 4	Principle of virtual work, D'Alembert's principle, Lagrange's equation of motion for conservative and non conservative systems-
Week 5	Simple applications-simple pendulum-Atwood's machine-compound pendulum-
Week 6	Hamilton's principle-Deduction of Lagrange's equation of motion from Hamilton's principle-Deduction of Hamilton's principle from D'Alembert's principle.
Week 7	Phase space-The Hamiltonian function H -Hamilton's Canonical equation of motion-
Week 8	Physical significance of H- Deduction of Canonical equation from a variational principle-
Week 9	Applications-Harmonic oscillator-Planetary motion-Compound pendulum
Week 10	Micro and macro states-The mu-space and gamma space-fundamental postulates of statistical mechanics-
Week 11	Ensembles-different types -Thermodynamical probability-entropy and probability-Boltzmann's theorem- Maxwell-Boltzmann statistics-
Week 12	Maxwell-Boltzmann energy distributive law- Maxwell-Boltzmann velocity distributive law.

Week 13	<u>UNIT V: Quantum Statistics</u> Development of Quantum statistics- Bose - Einstein and Fermi - Dirac statistics -
Week 14	Derivation of Planck's radiation formula from Bose – Einstein statistics - Free electrons in metal-
Week 15	Fermi gas-Difference between classical and quantum statistics

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (ODD SEMESTER)

Class : B.Sc., Physics E/M and T/M -- III Year Semester -- V

Subject Code : 19UEPHC4

Name of the Subject: RELATIVITY AND QUANTUM MECHANICS

Subject-in-charge: Dr. N. Mani and Dr. T. Hema Thanka Christlet

WEEK	TOPICS TO BE COVERED
Week 1	Frames of reference - Galilean transformation - Michelson - Morley experiment
Week 2	-Postulates of special theory of relativity - Lorentz transformation - length Contraction – time dilation - Relativity of simultaneity
Week 3	- addition of velocities - variation of mass with velocity– Mass energy relation - Elementary ideas of general relativity.
Week 4	Phase and group velocity - wave packet - expression of De Broglie's wave length .
Week 5	-Davisson and Germer's experiment - G.P.Thomson's experiment
Week 6	- Heisenberg's uncertainty principle and its consequences
Week 7	Inadequacy of classical mechanics - Basic postulates of quantum mechanics -Schrodinger equation
Week 8	- Properties of wave function - Probability interpretation of wavefunction -
Week 9	linear operators - self adjoint operators - expectation value - eigenvalues and eigenfunctions.
Week 10	Orbital angular momentum operators and their commutation relations -
Week 11	separation of three dimensional Schrodinger equations into radial and angular parts -
Week 12	Elementary ideas of spin angular momentum of an electron - Pauli matrices.
Week 13	Free particle solution - Particle in a box
Week 14	Potential well of finite depth (one dimension) - linear harmonic oscillator -
Week 15	rigid rotator and hydrogen atom.

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (ODD SEMESTER)

Class : B.Sc., Physics E/M and T/M -- III Year Semester -- V

Subject Code : 19UEPHE1

Name of the Subject: ENERGY PHYSICS

Subject-in-charge: Dr. A.C. GANESH KUMAR and Dr. M. KARL CHINNU

WEEK	TOPICS TO BE COVERED
Week 1	World's reserve of Commercial energy sources and their availability-
Week 2	India's production and reserves-Conventional and non-conventional sources of energy,
Week 3	Comparison – Coal- Oil and natural gas –applications - merits and demerits.
Week 4	Solar constant -Solar spectrum-Solar radiations outside earth's atmosphere –at the earth surface- on tilted surfaces -
Week 5	Solar Radiation geometry-Basic Principles of Liquid flat plate collector –Materials for flat plate collector -Construction and working-
Week 6	Solar distillation–Solar disinfection - Solar drying-Solar cooker(box type)-Solar water heating systems – Swimming pool heating.
Week 7	<u>UNIT III: Photovoltaic Systems</u> Introduction-Photovoltaic principle-Basic Silicon Solar cell- Power output and conversion efficiency-Limitation to photovoltaic efficiency-
Week 8	Basic photovoltaic system for power generation-Advantages and disadvantages-Types of solar cells-
Week 9	Application of solar photovoltaic systems - PV Powered fan – PV powered area lighting system – A Hybrid System.
Week 10	Biomass Energy - Introduction-Biomass classification- Biomass conversion technologies-Bio-gas generation-Factors affecting bio-digestion -
Week 11	Working of biogas plant- floating and fixed dome type plant - advantages and disadvantage of -Bio-gas from plant wastes-

	Methods for obtaining energy from biomass-
Week 12	Thermal gasification of biomass-Working of downdraft gasifier-Advantages and disadvantages of biological conversion of solar energy.
Week 13	<u>UNIT V: Wind Energy and Other Energy Sources</u> Wind Energy Conversion-Classification and description of wind machines, wind energy collectors-Energy storage--
Week 14	Energy from Oceans and Chemical energy resources-Ocean thermal energy conversion-tidal power, advantages and limitations of tidal power generation-
Week 15	Energy and power from waves- wave energy conversion devices-Fuel cells- and application of fuel cells- batteries- advantages of battery for bulk energy storage- Hydrogen as alternative fuel for motor vehicles.

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (EVEN SEMESTER)

Class : B.Sc., Physics E/M and T/M -- I Year Semester -- II
 Subject Code : 19UBPHC1
 Name of the Subject: HEAT, THERMODYNAMICS AND SOUND
 Subject-in-charge: Dr. A.C. GANESH KUMAR and Dr. T. HEMA THANKA
 CHRISTLET

WEEK	TOPICS TO BE COVERED
Week 1	Specific heat capacity – Specific heat capacity of solids – Dulong and Petit’s law – Specific heat capacity of liquid – method of mixtures –
Week 2	Barton’s correction – Specific heat capacity of gases – C_p and C_v by Regnault’s method
Week 3	Joule-Kelvin effect – porous plug experiment – Linde’s method of liquefying air
Week 4	Thermal conductivity – rectilinear flow of heat – thermal conductivity of a good conductor – Forbe’s method –
Week 5	thermal conductivity of a bad conductor – Lee’s disc method – radiation – blackbody radiation –
Week 6	Wien’s law – Stefan’s law – Newton’s law of cooling from Stefan’s law
Week 7	Thermodynamic equilibrium – zeroth law of thermodynamics – first law of thermodynamics – Reversible and irreversible processes
Week 8	– second law of thermodynamics-Heat engine – Carnot’s engine – Carnot’s theorem – thermodynamics scale of temperature-
Week 9	Entropy – entropy and available energy – temperature – entropy diagram for Carnot’s cycle - III Law of thermodynamics – Nernst’s heat theorem-Maxwell’s thermodynamic relations
Week 10	Unit 4: Sound Simple Harmonic Motion –Composition of two S.H.M in a straight line-at right angles-Lissajous's figures-
Week 11	Free, Damped, Forced vibrations - Resonance -Fourier theorem-application
Week 12	Laws of transverse vibration of strings - Sonometer-Determination of AC frequency using sonometer - Determination of frequency using Melde’s apparatus-Decibels - Intensity levels - decibel-noise pollution

Week 13	Ultrasonics – production – piezo electric crystal method –
Week 14	magnetostriction method – applications. Acoustics of buildings – reverberation – Absorption coefficient –
Week 15	Sabine's formula – Acoustics aspects of halls and auditoriums.

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (EVEN SEMESTER)

Class : B.Sc., Physics E/M and T/M -- II Year Semester -- IV

Subject Code : 19UDPHC1

Name of the Subject: ATOMIC PHYSICS

Subject-in-charge: Dr. S. SESHADRI and Dr. K. SRINIVASAN

WEEK	TOPICS TO BE COVERED
Week 1	The free electron theory of metals – expressions for electrical conductivity – thermal conductivity –
Week 2	Wiedman-Franz's law-Hall effect-magneto resistance-determination of electronic charge – Millikan's oil drop method –
Week 3	electron microscope – Band theory of solids – classification of solids on the basis of band theory.
Week 4	Discovery-properties- analysis – Thomson's parabola method –
Week 5	Aston's mass spectrograph – Bainbridge's mass spectrograph –
Week 6	Dempster's mass spectrograph – Dunnington's method of determining e/m.
Week 7	Early atomic spectra-Thomson model-Alpha particle scattering-Rutherford's nuclear model-drawbacks-Bohr atom model –
Week 8	Bohr's interpretation of the Hydrogen spectrum-correction for nuclear motion-evidences in favour of Bohr's theory-Ritz combination principle-correspondence principle-Sommerfield's relativistic atom model-drawbacks-
Week 9	the vector atom model – Quantum numbers associated with the vector atom model — the Pauli's exclusion principle – periodic classification of elements
Week 10	Coupling schemes-L-S Coupling-j-j Coupling- Hund rules-magnetic dipole moment due to orbital motion of the electron- due to spin of the electron -
Week 11	Stern and Gerlach experiment-spin-orbit coupling-optical spectra-spectral terms-spectral notation- selection rules- intensity rules-interval rule- fine structure of sodium D line- hyperfine structure-
Week 12	Normal Zeeman effect- theory and experiment- quantum mechanical explanation - Larmor's theorem- Anomalous Zeeman effect- Paschen –Bach effect-Stark effect.
Week 13	Production of X-rays – properties-absorption of X-rays – X-ray absorption edges- Bragg's law – Bragg's X-ray spectrometer –the powder crystal method –Laue's method – Rotating crystal method –X-ray spectra-
Week 14	continuous spectra- characteristic spectra-Moseley's law - importance-width of spectral lines-Doppler broadening-collision

	broadening-X-ray Detectors-scintillation detector-
Week 15	semiconductor detectors Compton effect- theory and experimental verification.-Einstein's photoelectric equation-photoelectric cells-photo emissive cells-photovoltaic cells-photoconductive cells

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (EVEN SEMESTER)

Class : B.Sc., Physics E/M and T/M -- III Year Semester -- VI

Subject Code : 19UFPHC1

Name of the Subject: NUCLEAR PHYSICS

Subject-in-charge: Dr. S. Karthikeyan and Dr. S. Seshadri

WEEK	TOPICS TO BE COVERED
Week 1	UNIT I: Properties and structure of Nuclei General properties of nucleus- binding energy – BE/A curve - significance -
Week 2	proton electron theory- proton neutron theory -Nuclear forces –characteristics –
Week 3	Meson theory of nuclear forces – Yukawa Potential- Nuclear models.
Week 4	Fundamental laws of radio activity –theory of α , β and γ decay- properties of alpha, beta and gamma rays -
Week 5	neutrino and its properties-electron capture. - nuclear isomers-
Week 6	Mossabauer effect - applications- Radio carbon dating- radio isotopes – uses.
Week 7	kinematics of nuclear reaction-Nuclear fission –Nuclear fusion – Nuclear reactor-uses -
Week 8	atom bomb - hydrogen bomb-fusion reactor –plasma confinement –
Week 9	artificial transmutation-Q value of nuclear reaction-types of nuclear reaction
Week 10	Neutron sources and properties- Detectors-G.M.Counter-scintillation counter-bubble chamber
Week 11	Wilson cloud chamber-Accelerators-cyclotron-synchrocyclotron-betatron-synchrotrons
Week 12	Cosmic rays-introduction-discovery-latitude, altitude and azimuth effects-longitudinal effect-north –south effect-
Week 13	seasonal and diurnal changes-primary and secondary cosmic rays-nature of cosmic rays- cosmic ray showers-Van Allen belt- origin of cosmic radiation.
Week 14	Elementary particles-introduction-particles and antiparticles-antimatter-the fundamental interaction-
Week 15	elementary particle quantum numbers-conservation laws and symmetry-the quark model

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (EVEN SEMESTER)

Class : B.Sc., Physics E/M and T/M -- III Year Semester -- VI

Subject Code : 19UFPHC2

Name of the Subject: SOLID STATE PHYSICS

Subject-in-charge: Dr. LYDIA CAROLINE MANOHAR and Dr. K. SRINIVASAN

WEEK	TOPICS TO BE COVERED
Week 1	Types of bonds in crystals - Ionic, covalent, Metallic, Vander waal's and Hydrogen Bonding -
Week 2	Bond energy of sodium chloride molecule - variation of inter atomic force with inter atomic spacing -
Week 3	cohesive energy - cohesive energy of ionic solids
Week 4	Crystal Lattice -Primitive and unit cell-seven classes of crystal-Bravais Lattice-Miller Indices-Structure of crystals--
Week 5	Simple cubic, Face centered cubic, Body centered cubic and Hexagonal close packed structure -Sodium Chloride, Zinc Blende and Diamond Structures.
Week 6	Crystal Diffraction – Bragg's law-Experimental methods-Laue method, powder method
Week 7	Spontaneous Magnetization –classical Theory of Diamagnetism –
Week 8	Weiss theory of Para magnetism – Ferromagnetic domains – Bloch wall –
Week 9	Basic ideas of anti-ferromagnetism – Ferrimagnetisms – Ferrites in computer Memories.
Week 10	Band theory of solids –classification of insulators, Semiconductors, conductors – intrinsic and extrinsic semiconductor –
Week 11	Carrier concentration for electron - Polarization – frequency and temperature effects on polarization-
Week 12	dielectric loss-ClausiusMosotti relation-determination of dielectric constants.
Week 13	Superconductivity - Introduction - General Properties of Superconductors - effect of magnetic field -
Week 14	Meissner effect - effect of current - thermal properties - entropy - specific heat -energy gap - isotope effect - Type-I and

	Type-II Superconductors
Week 15	Explanation for the Occurrence of Super Conductivity - BCS theory - Application of Superconductors - High T_c superconductors.

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (EVEN SEMESTER)

Class : B.Sc., Physics E/M and T/M -- III Year Semester -- VI

Subject Code : 19UFPHE1

Name of the Subject: MICROPROCESSOR UNDAMENTALS

Subject-in-charge: Dr. A.C. GANESH KUMAR and Dr. M. KARL CHINNU

WEEK	TOPICS TO BE COVERED
Week 1	Architecture of 8085 – registers, flags, ALU, address and data bus,
Week 2	demultiplexing address/data bus – control and status signals – control bus,
Week 3	Programmer's model of 8085 –Pin out diagram – Functions of different pins.
Week 4	Instruction set of 8085 – data transfer, arithmetic, logic, branching and machinecontrol group of instructions –
Week 5	addressing modes – register indirect, direct, immediate andimplied addressing modes.Assembly language & machine language –
Week 6	programming techniques: addition,subtraction, multiplication, division, ascending, descending order, largest and smallest(single byte)
Week 7	Memory interfacing
Week 8	Interfacing 2kx8 ROM and RAM, Timing diagram of 8085.
Week 9	MOVRd, Rs – MVI Rd,data(8))
Week 10	Interfacing input port and output port to 8085
Week 11	– Programmable peripheral interface 8255–
Week 12	flashing LEDs.
Week 13	Interrupts in 8085 - hardware and software interrupts –
Week 14	RIM, SIM instructions –priorities
Week 15	simple polled and interrupt controlled data transfer.

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (EVEN SEMESTER)

Class : B.Sc., Physics E/M and T/M -- III Year Semester -- VI

Subject Code : 19UFPHE2

Name of the Subject: OPTOELECTRONICS

Subject-in-charge: Dr. N. Mani and Dr. D. Subashini

WEEK	TOPICS TO BE COVERED
Week 1	Introduction – PN junction as a Light Source (LED) –
Week 2	LED materials – Advantages – LCD –
Week 3	Characteristics and action of LCD – Advantages.
Week 4	Laser- Introduction– characteristics of Laser– Spontaneous and stimulated emission–
Week 5	Einstein coefficients- condition for population inversion–
Week 6	three level scheme– semi conductor.
Week 7	Photo detector- characteristics of photo detectors–
Week 8	PN junction photo detector– PIN photo diode–
Week 9	Avalanche photo diode- Photo transistor.
Week 10	Introduction – principle of optical fibre –
Week 11	light transmission in a optical fibre –
Week 12	Acceptance angle – Numerical aperture.
Week 13	Fibre index profiles – Step index, graded fibre (transmission of signals) –
Week 14	Advantages of fibre optic communications, optical switching
Week 15	– Logic gates

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (ODD SEMESTER)

Class : B.Sc., Physics E/M and T/M -- I Year Semester -- I

Subject Code : 19APHC1

Name of the Subject: MECHANICS AND PROPERTIES OF MATTER

Subject-in-charge: Dr. N. Mani and Dr. D. Subashini

WEEK	TOPICS TO BE COVERED
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (EVEN SEMESTER)

Class : B.Sc., Physics E/M and T/M -- III Year Semester -- VI

Subject Code :

Name of the Subject: RELATIVITY AND QUANTUM MECHANICS

Subject-in-charge: Dr. N. Mani and Dr. T. Hema Thanka Christlet

WEEK	TOPICS TO BE COVERED
Week 1	Frames of reference - Galilean transformation - Michelson - Morley experiment
Week 2	-Postulates of special theory of relativity - Lorentz transformation - length Contraction – time dilation - Relativity of simultaneity
Week 3	- addition of velocities - variation of mass with velocity– Mass energy relation - Elementary ideas of general relativity.
Week 4	Phase and group velocity - wave packet - expression of De Broglie's wave length .
Week 5	-Davisson and Germer's experiment - G.P.Thomson's experiment
Week 6	- Heisenberg's uncertainty principle and its consequences
Week 7	Inadequacy of classical mechanics - Basic postulates of quantum mechanics -Schrodinger equation
Week 8	- Properties of wave function - Probability interpretation of wavefunction -
Week 9	linear operators - self adjoint operators - expectation value - eigenvalues and eigenfunctions.
Week 10	Orbital angular momentum operators and their commutation relations -
Week 11	separation of three dimensional Schrodinger equations into radial and angular parts -
Week 12	Elementary ideas of spin angular momentum of an electron - Pauli matrices.
Week 13	Free particle solution - Particle in a box
Week 14	Potential well of finite depth (one dimension) - linear harmonic oscillator -
Week 15	rigid rotator and hydrogen atom.

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (EVEN SEMESTER)

Class : B.Sc., Physics E/M and T/M -- III Year Semester -- VI

Subject Code :

Name of the Subject: CLASSICAL MECHANICS AND MATHEMATICAL PHYSICS

Subject-in-charge: Dr.S. KARTHIKEYAN AND Dr. K. SRINIVASAN

WEEK	Topics to be covered
Week 1	Unit1:ClassicalMechanics-I Constraints and Degrees of Freedom – Generalized Notations - coordinates –displacement – Velocity – Acceleration – Momentum – Force – Potential Energy –D’Alembert’sPrinciple– LagrangianequationfromD’Alembert’sprinciple– Application of Lagrange’s equation of motion to Linear Harmonic Oscillator, SimplePendulumandCompoundPendulum. Unit2:ClassicalMechanics–II PhaseSpace–Hamiltonianfunction– HamiltonianPrinciple– Hamilton’scanonicalequationsofmotion– PhysicalsignificanceofH– ApplicationsofHamiltonianequations of motion to Simple Pendulum, Compound Pendulum and Linear HarmonicOscillator. Unit3:SpecialFunctions Definition–TheBetafunction–Gammafunction– EvaluationofBetafunction– – EvaluationofGammafunction– RelationbetweenBetaandGammafunctions–Problems– Besselfunction-Generalisingandrecurrencerelation. Unit4:Matrices Introduction–specialtypesofMatrices– TransposeofaMatrix–TheConjugateof a Matrix – Conjugate Transpose of a Matrix – Symmetric and Anti symmetric –HermitianandskewHermitian– OrthogonalandUnitaryMatrices–Properties– Characteristicsequation– Rootsandcharacteristicsvector– Diagonalizationofmatrices – inverseofamatrix-Cayley-Hamiltontheorem–Problems

	Unit5: Vector Calculus Divergence and curl of a vector point function - Line Integral – Surface Integral – Volume Integral (without proof) – Gauss's Divergence theorem and its proof -Deduction from Gauss theorem – Green's theorem in the plane -Stoke's theorem in space- simple problems.
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (EVEN SEMESTER)

Class : B.Sc., Physics E/M and T/M -- III Year Semester -- VI

Subject Code :

Name of the Subject: INTEGRATED ELECTRONICS

Subject-in-charge: Dr.D. SUBASHINI AND Dr. M. KARL CHINNU

WEEK	Topics to be covered
Week 1	Unit1: Fundamental Digital Electronics Number systems – binary – hexadecimal – Binary addition – subtraction (1's and 2's complement method) – multiplication - division - BCD – Conversion – simplification of logic circuits - using (i) Boolean algebra, (ii) Karnaugh map – Demorgan's theorems - NAND and NOR as universal building blocks. Unit2 : Combinational Logic Circuits Half adder, full adder, half subtractor and full subtractor – 4 bit adder/subtractor-decoder, encoder-multiplexer-demultiplexer. Unit3: Sequential Logic Circuits R.S flipflop, D flipflop and JK flipflops- JK Master Slave flipflop-synchronous and ripple counters- BCD counter – Up/Down counters-shift registers- serial and parallel registers-ring and twisted ring counter. Unit4 : OP-AMP Basic Applications Characteristics parameters – differential gain – CMRR – Slew rate – bandwidth-applications – inverter, non-inverter, integrator, differentiator, summing, difference and averaging amplifier - solving simultaneous equations - comparator - square wave generator - Wien's bridge oscillator-Schmitt trigger Unit5: Timer, DAC/ADC Timer 555 - Internal block diagram and working - astable and monostable multivibrator-schmitt trigger. D/A converter - binary weighted method - A/D converter - successive approximation method.
Week 2	
Week 3	
Week 4	

Week 5	
Week 6	
Week 7	
Week 8	
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	

DEPARTMENT OF PHYSICS
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai
39

B.Sc., Degree Programme in Physics
TEACHING PLAN (EVEN SEMESTER)

Class : B.Sc., Physics E/M and T/M -- III Year Semester -- VI

Subject Code :

Name of the Subject: NUMERICAL METHODS

Subject-in-charge: Mrs. P.R.KANIMOZHI AND Dr. T. HEMA THANKA
 CHRISTLET

WEEK	Topics to be covered
Week 1	Unit1: Simultaneous Linear Algebraic Equations Method of triangularisation - Gauss elimination method - Inverse of a matrix - Gauss - Jordan method Unit2: Numerical Solution of Algebraic, Transcendental and Differential Equation Bisection method - Regula falsi method - Newton-Raphson method -- Horner's method - Solution of ordinary differential equation - Euler's method. Unit3: Interpolation Finite differences - operators Δ, ∇, E, D - relation between operators - linear interpolation - interpolation with equal intervals - Newton forward interpolation formula - Newton backward interpolation formula. Unit4 : Curve Fitting Principles of least squares - fitting a straight line - linear regression - fitting an exponential curve. Unit5: Numerical Integration Trapezoidal Rule - Simpson's 1/3 rule and 3/8 rule - Applications - Weddle's rule
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	

Week 7	
Week 8	
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

B.Sc Degree Program in Psychology
Teaching Plan (Odd Semester – 2022-2023)

Class: B.Sc Psychology – I Year

Semester I

Subject Code: 22UAPSC1 Name of the Subject : General Psychology I

Subject in charge: Dr. H. Sai Geetha

HOURS	Unit	Topics to be covered
5	Unit – 1	Definition, goals, history of psychology,
5	Unit – 1	Schools and modern perspectives
5	Unit – 1	Psychology in India, Methods of psychology, Scope and Branches of Psychology
5	Unit – 2	Sensation-Meaning, Psychophysics, Thresholds, Weber's Law, Adaptation, Basic sensation: Vision
5	Unit – 2	Hearing, Touch and other Skin senses, Olfaction, Gustation.
5	Unit – 2	Attention, Perception, Illusion and hallucination
3	Unit – 3	Consciousness – Definition, Types, Natural state and waking state of consciousness
6	Unit – 3	Sleep- stages, disorders and dream & theories of dream
6	Unit – 3	Altered states of consciousness- meaning, hypnosis, use of drugs, meditation and other altered states
5	Unit – 4	Learning – Definition, Classical conditioning
5	Unit – 4	Operant conditioning, similarities and differences between classical and operant conditioning
5	Unit – 5	Social& cognitive learning- Latent, Insight and observational
6	Unit – 5	Memory- Definition , processes and information processing model
5	Unit - 5	Forgetting- meaning, theory and causes
4		Improving memory

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

B.Sc Degree Program in Psychology
Teaching Plan (Odd Semester – 2022-2023)

Class: B.Sc Psychology – I Year

Semester I

Subject Code: 22UAPSC2 Name of the Subject : Biological Psychology I

Subject in charge: Mrs. Gandhijayanthi

HOURS	Unit	Topics to be covered
4	Unit – 1	Meaning and Viewpoints to explore Biology of Behaviour
6	Unit – 1	Approaches that relate brain and behaviour
5	Unit -1	Levels of analysis
6	Unit – 2	Methods of visualising and stimulating the living human brain, Contrast X-rays, X-ray Computer Tomography, Magnetic Resonance Imaging, Positron Emission Tomography, Functional , Magnetic Resonance Imaging, Diffusion Tensor Imaging and Transcranial Magnetic Stimulation.
4	Unit – 2	Recording human psychophysiological activity- Scalp Electron Encephalography, Magneto Encephalography, Muscle Tension, Eye Movement, Skin Conductance, and Cardiovascular Activity.
3	Unit – 2	Invasive physiological research methods-Stereotaxic surgery, Lesion Methods, Electrical Stimulation, and Invasive Electro Physiological Recording Methods.
6	Unit – 3	Basic features of the Nervous System: An overview, Meninges, Ventricular system and production of cerebrospinal fluid.
6	Unit – 3	Cells of the Nervous System: Neurons, Supporting cells, Blood-brain barrier
5	Unit – 3	Neural Communication: An overview, measuring electrical potentials of axons. Membrane Potential: Balance of two forces, Action Potential, Conduction of the action potential.
4	Unit – 4	Communication between Neurons: Structure of synapses
6	Unit – 4	Neurotransmitter: meaning- types,
4	Unit – 4	Activation of receptors- Postsynaptic potentials- Termination of postsynaptic potentials.
7	Unit -5	Nervous System: Development of the central nervous system, Brain: Forebrain,
6	Unit – 5	Hind brain, and Midbrain, Division of Nervous System: Central Nervous System,
3	Unit – 5	Peripheral Nervous System- Spinal nerves, Cranial nerves, Autonomic Nervous system – Sympathetic and Parasympathetic.

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

B.Sc Degree Program in Psychology

Teaching Plan (Odd Semester – 2022-2023)

Class: B.Sc Psychology – I Year

Semester I

Subject Code: 22UAPSA1 Name of the Subject : Educational Psychology

Subject in charge: Mrs.Pinky

HOURS	Unit	Topics to be covered
5	Unit - 1	Meaning and definition, Education and Educational Psychology,
5	Unit – 1	Nature, Scope, and functions of Educational Psychology – Need for Educational Psychology
5	Unit -1	Methods of Educational Psychology.
5	Unit – 2	Behaviouristic Learning-Classical and Operant Conditioning, Social & Cognitive approaches to learning-Bandura's Social Cognitive Theory
5	Unit – 2	Observational Learning, Information Processing approach-Nature, Attention, Memory,
5	Unit – 2	Expertise and Meta Cognition: Social constructivist approach to Teaching-Teachers and Peers as joint contributors to student's Learning
5	Unit – 3	Differences in Cognitive Styles & Learning Strategies.
5	Unit – 3	Readiness for Learning & Classroom Achievement, Intelligence, Creativity & Personality
5	Unit – 3	Socio-cultural Differences: Gender, Socio-Economic Status, Regional, Ethnic & Linguistic Diversity
5	Unit – 4	Characteristics of Effective Teachers; Issues related to Technological Advances
5	Unit – 4	Classroom Management-Need to Manage classrooms Effectively, Designing the Physical environment of the Classroom
5	Unit – 4	Creating the Positive Environment for learning, Being a good communicator.
6	Unit -5	Labeling Controversy, Categories of Exceptionalities, Self regulations and students with exceptionalities, Using Technology to support learner with disabilities, Brain research and exceptionalities
5	Unit – 5	Teachers responsibilities in inclusive class rules-Modifying instructions to meet student needs
4	Unit – 5	Collaborating with Special Educational Professionals, Promoting Social Integration and Development

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

B.Sc Degree Program in Psychology
Teaching Plan (Odd Semester – 2022-2023)

Class: B.Sc Psychology – I Year

Semester I

Subject Code: 22UAPSN1 Name of the Subject : Emotional Intelligence

Subject in charge: Mrs. Gandhijayanthi

HOURS	Unit	Topics to be covered
2	Unit - 1	Emotional Intelligence-Definition and importance
2	Unit – 1	Emotional Quotient and Intelligence Quotient.
2	Unit -1	Activities
2	Unit – 2	Self-awareness
2	Unit – 2	Self management
2	Unit – 2	Activities
2	Unit – 3	Social –awareness
2	Unit – 3	Relationship management
2	Unit – 3	Activities
2	Unit – 4	Techniques to manage emotions: Meditation, Yoga, Mindfulness, Time out,
2	Unit – 4	Relaxation Exercise
2	Unit – 4	Practicing of techniques
2	Unit -5	Conflict Management
2	Unit – 5	Effective Leadership
2	Unit – 5	Application of EI in relationships and workplace

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

B.Sc Degree Program in Psychology
Teaching Plan (Odd Semester – 2022-2023)

Class: B.Sc Psychology – II Year

Semester III

Subject Code: 19UCPSC1

**Name of the Subject : Developmental
Psychology I**

Subject in charge: Mrs. Pinky

HOURS	Unit	Topics to be covered
5	Unit - 1	Meaning of developmental changes, Significant facts about development, Developmental stages, Developmental Issues, Conception of Age
6	Unit – 1	Characteristics of the Prenatal Period, How Life begins, Importance of Conception, Periods of Conception, Periods of Prenatal development
4	Unit -1	Stages of child Birth - Types of childbirth – Attitudes of significant people - Prenatal hazards & complications of low birth weight
5	Unit – 2	Characteristics of Infancy, developmental tasks
5	Unit – 2	Major adjustment of Infancy, Conditions influencing adjustment to Postnatal life
5	Unit – 2	Characteristics of the Infant, Hazards of Infancy.
6	Unit – 3	Characteristics of Babyhood, Developmental tasks of babyhood, Physical development ,Physiological development, Muscle Control
5	Unit – 3	Speech development, Emotional behaviour, Socialization, Interest in Play, Development of Understanding ,Beginnings of Morality
4	Unit – 3	Beginnings of Sex-Role typing, Family Relationships, Personality development, Hazards and Happiness.
6	Unit – 4	Characteristics of Early Childhood, Developmental tasks, Physical development, Physiological habits
4	Unit – 4	Skills of Early Childhood, Improvement in Speech, Emotions, Socialization, Play
5	Unit – 4	Development of Understanding, Moral development, Common Interests, Sex-role Typing, Family Relationship, Personality development, Hazards and Happiness.
5	Unit -5	Characteristics of Late Childhood, Developmental tasks, Physical development , Skills , Speech improvement

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

6	Unit – 5	Emotions and Emotional Expressions, Social groupings and Social behaviour, Play interest and activities, Increase in Understanding , Moral attitudes and behaviour, Interests
4	Unit – 5	Sex-role Typing, Changes in Family relationships, Personality Changes, Hazards and Happiness

B.Sc Degree Program in Psychology
Teaching Plan (Odd Semester – 2022-2023)

Class: B.Sc Psychology – II Year

Semester III

Subject Code: 19UCPSC2 Name of the Subject : Introduction to Theories of Personality

Subject in charge: Mrs. Gandhijayanthi

HOURS	Unit	Topics to be covered
2	Unit - 1	Definition, Meaning & Nature, Individual Uniqueness, Gender, Culture, Formal Theories, Personal Theories
3	Unit – 1	Subjectivity in Personality Theories, Self-Report Measure: Biological Measures, Behavioral Assessment
5	Unit -1	Projective Techniques , Clinical Interviews, Online and Social Media Analysis.
8	Unit – 2	Sigmund Freud: Classical Psychoanalysis, Instincts, Structure of Mind, Psychosexual Development Therapeutics Techniques, Free Association. Catharsis, Dream Analysis
6	Unit – 2	Carl Jung: Analytical Psychology, Psychological Types, Collective Unconscious
6	Unit – 2	Alfred Adler: Individual Psychology, Inferiority Feelings ,Role of Birth Order.
5	Unit – 3	Erik Erikson: Identity Formation, Ego Crises, Approaches to Trait: Lexical, Statistical, Theoretical
5	Unit – 3	Gordon Allport: Culture, Functional Equivalence, Personal Disposition
5	Unit – 3	Eysenck's: Hierarchical Model of Personality, Cattell's Taxonomy: The 16 Personality Factor.
5	Unit – 4	Gestalt: Kurt Lewin's Field Theory; Martin Seligman: Learned Helplessness and the Optimistic/ Pessimistic Explanatory Style
5	Unit – 4	Rotter: Locus of Control theory Maslow: Hierarchy of Needs, Self-Actualization ,
5	Unit – 4	Rogers: Growth, Inner Control , Becoming One's Self
5	Unit -5	Albert Bandura: Social-Cognitive Learning Theory, Self- System

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

4	Unit – 5	Skinner: Operant Conditioning
6	Unit – 5	Cognitive Style, Perceptual Mechanisms, Schema Theory, Kelly's Personal Construct Theory

B.Sc Degree Program in Psychology
Teaching Plan (Odd Semester – 2022-2023)

Class: B.Sc Psychology – II Year

Semester III

Subject Code: 19UCPSA3

Name of the Subject : Statistics In Psychology

Subject in charge: Dr. H. Sai Geetha

HOURS	Unit	Topics to be covered
3	Unit - 1	Meaning of statistics, Importance of Statistics in Psychology, Parameters and Estimates, Descriptive Statistics, Inferential Statistics
3	Unit – 1	Variables and their types; Levels of measurement: Nominal Scale, Ordinal Scale, Interval Scale, Ratio Scale; Frequency tables: Making a Frequency Table
4	Unit -1	Frequency tables for Nominal Variable, Grouped Frequency Tables, Frequency Graphs: Histogram, Frequency Polygon.
6	Unit – 2	Mean- from Frequency Distributions - Assumed Mean Method-Properties of Mean. Median – Calculation of Median from Ungrouped data- Calculation of Median from a Frequency Distribution.
4	Unit – 2	Mode- Calculation of Mode in a Frequency Distribution. Comparison of Mean, Median and Mode- Guidelines for the Use of Central Tendencies.
4	Unit – 2	Range- Calculation of Range- Average Deviation- Calculation of the Average Deviation. Semi Interquartile Range- Calculation of Q1, Q3 and Quartile Deviation.
6	Unit – 2	Variance and Standard Deviation- Methods of Calculating Variance and Standard Deviation from Ungrouped data- Calculation of Standard Deviation from Grouped data- Calculation of Standard Deviation from Assumed Mean.
5	Unit – 3	Normal Distribution: Properties of Normal Curve- Areas under the Normal Curve- Importance of Normal Distribution- Skewness- Kurtosis- Importance of measures of Skewness and Kurtosis.
4	Unit – 3	Correlation: Concept of Correlation- Scatter Plot- Product Moment Correlation- Calculation of Product Moment Correlation-
6	Unit – 3	Spearman's Rank- Difference Correlation Co-efficient- Properties of Correlation Co-efficient.

DEPARTMENT OF PSYCHOLOGY

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

5	Unit – 4	Core logic of Hypothesis testing - Hypothesis testing process – One tailed and two tailed hypothesis tests. Decision Errors: Type I Error – Type II Error.
5	Unit -4	Inferential statistics: t-test – t-test for a single sample – t' test for a dependent means – Assumptions of single sample and t' test for dependent means.
5	Unit -4	t' test for independent means: distribution of difference between means – Hypothesis testing with 't' test for independent means.
5	Unit -5	Chi-Square: Degrees of Freedom- Test of the Hypothesis of Normality- Calculation of the Chi-Square for 2x2 tables- Yates' Correction for Continuity- Assumptions of Chi Square test,
5	Unit – 5	Non-parametric Methods: Sign test- Assumptions and Uses of Sign Test- Median Test- Run Test
5	Unit – 5	Kolmogrov and Smirnov Two Sample test- Precautions of use of Non-parametric tests.

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

B.Sc Degree Program in Psychology
Teaching Plan (Odd Semester – 2022-2023)

Class: B.Sc Psychology – II Year

Semester III

Subject Code: 19UCSBE3

Name of the Subject : Personality Enrichment

Subject in charge: Mrs. Gandhijayanthi

HOURS	Unit	Topics to be covered
2	Unit – 1	Definition of Personality, Determinants of Personality – biological, psychological and socio-cultural factors
2	Unit – 1	Misconceptions and Classifications
2	Unit -1	Need for personality development.
2	Unit – 2	Definition of self, self concept and self awareness, Self analysis through SWOT and Johari window
2	Unit – 2	Definition of Motivation, Types of Motivation, Techniques and strategies for self motivation,
2	Unit – 2	Motivation checklist and Goal setting based on the principle of SMART, Self motivation and life
2	Unit – 3	Definition and importance of memory
2	Unit – 3	Causes of forgetting, Techniques of improving memory
2	Unit – 3	Decision making process
2	Unit – 4	Definition of study skills, Characteristics of study skills
2	Unit – 4	Techniques of passing exams
2	Unit – 4	Activities
2	Unit -5	Definition and characteristics of Assertiveness
2	Unit – 5	Assertive: submissive, Aggressive – differences
2	Unit – 5	Assertiveness skills.

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

B.Sc Degree Program in Psychology
Teaching Plan (Odd Semester – 2022-2023)

Class: B.Sc Psychology – II Year

Semester III

Subject Code: 19UCEVS1 Name of the Subject : Environmental Studies

Subject in charge: Mrs. Pinky

HOURS	Unit	Topics to be covered
2	Unit - 1	Definition, Multidisciplinary nature of environmental science
2	Unit – 1	Scope and importance
2	Unit -1	Global environmental problems
2	Unit – 2	Concept of an ecosystem. Structure and function of an ecosystem.
2	Unit – 2	Producers, consumers and decomposers. Energy flow in the ecosystem.
2	Unit – 2	Food chains, food webs and ecological pyramids
2	Unit – 3	Introduction – Definition : Value of biodiversity: consumptive use, productive use.
2	Unit – 3	India as a mega-diversity nation
2	Unit – 3	Hot-spots of biodiversity. Brief account on biodiversity conservation
2	Unit – 4	Definition – Cause, effects and control measures of :- a) Air pollution, b) Water pollution.
2	Unit – 4	Solid waste Management : Causes, effects and control measures of urban and industrial wastes.
2	Unit – 4	Role of an individual in prevention of pollution.
2	Unit -5	Water conservation, rain water harvesting.
2	Unit – 5	Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents.
2	Unit – 5	Waste land reclamation.

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

B.Sc Degree Program in Psychology
Teaching Plan (Odd Semester – 2022-2023)

Class: B.Sc Psychology – III Year

Semester V

Subject Code: 19UEPSC1 Name of the Subject : Abnormal Psychology I

Subject in charge: Dr. H. Sai Geetha

HOURS	Unit	Topics to be covered
10	Unit - 1	Defining Abnormal Behavior - Causes of Abnormal Behavior: Necessary, Predisposing, Precipitating and Reinforcing causes
10	Unit – 1	Historical views of abnormal behaviour- Brief note on DSM 5 and ICD 11 classification system.
7	Unit - 2	MODELS Biological – Psychodynamic – Behaviour
8	Unit - 2	MODELS Cognitive – Humanistic - Existential, Interpersonal perspective - Bio-cultural.
5	Unit -3	Intellectual disability: Definition, Clinical types and Causal factor, Autism Spectrum disorder: Clinical Picture and Causal Factors
5	Unit – 3	Specific Learning disorder: Clinical Picture and Causal factors, Attention Deficit /Hyperactivity disorder
5	Unit – 3	Conduct Disorder, Neuro cognitive Disorder.
5	Unit – 4	Generalized Anxiety Disorders - Phobic Disorder
5	Unit - 4	Post Traumatic Stress Disorder - Obsessive Compulsive Disorder - Panic Disorders
5	Unit - 5	Somatic Symptoms and related disorders (SSD): Complex Somatic Symptom Disorder- Illness Anxiety Disorder- Functional Neurological Disorder
5	Unit - 5	. Dissociative Disorders: Dissociative Amnesia, Dissociative Identity Disorder
5	Unit - 5	Depersonalization and Derealization Disorder –Causal factors and Treatment

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

B.Sc Degree Program in Psychology
Teaching Plan (Odd Semester – 2022-2023)

Class: B.Sc Psychology – III Year

Semester V

Subject Code: 19UEPSC2

Name of the Subject : Social Psychology I

Subject in charge: Mrs.Pinky

HOURS	Unit	Topics to be covered
15	Unit - 1	Definition of Social Psychology – Nature of Social Psychology- Brief History- Principles of Social Psychology - Social Psychology and Human Values- Social Psychology and Common Sense- Research Methods
5	Unit -2	Self-Presentation: Self-Other accuracy in predicting behaviour- Self-Presentation tactics, Self-Knowledge: Introspection, self from the observer's standpoint, Personal identity versus social identity: importance of the social context and others' treatment
5	Unit -2	Social Comparison: Self-serving biases and unrealistic optimism, Self-esteem: measurement of self-esteem - impact of migration on self-esteem - gender differences and self-esteem
5	Unit -2	Self as a target of prejudice: concealing one's identity and its impact on well-being - overcoming the effects of stereotype threat
5	Unit – 3	Judging the social world: Perceiving the social world - Explaining the social world– Importance of social beliefs- Self-fulfilling prophecy, ,
5	Unit – 3	Cognitive social psychology, Behaviour and Attitudes: Conditions When Attitudes Determine Behaviour – Conditions When Behaviour Determines Attitudes- Explaining Why Behaviour Affect Attitudes
5	Unit – 3	Self presentation: Impression Management, Self justification: Cognitive Dissonance- Self perception: Comparing the theories.
6	Unit – 4	Conformity: Definitions- Classic Studies on Conformity- Compliance & Obedience- Factors Predicting Conformity- Reasons for Conformity-,,
4	Unit – 4	Characteristics of people who conform- Resisting social pressures to conform

DEPARTMENT OF PSYCHOLOGY

DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

5	Unit – 4	Compliance: Principles of compliance, Effectiveness of compliance strategies, Obedience: Causes & resisting the effects of destructive obedience
15	Unit - 5	Altruism and pro-social behaviour: Theoretical perspectives- By Stander Effect, Helping: Reasons for Helping – Conditions Governing Helping – Characteristics of People Who Help – Increasing Helping Behaviour

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

B.Sc Degree Program in Psychology
Teaching Plan (Odd Semester – 2022-2023)

Class: B.Sc Psychology – III Year

Semester V

Subject Code: 19UEPSC3

**Name of the Subject : Introduction To
Research Methodology**

Subject in charge: Mrs. Gandhijayanthi

HOURS	Unit	Topics to be covered
8	Unit - 1	Definition- Need and Importance of psychological Research- Objectives of Research - Types of Research
7	Unit – 1	Research Process - Principles of a Good Research - Problems encountered by researches in India
8	Unit - 2	Research Problem: Meaning and characteristics of a problem - ways in which a problem is manifested - Types of Problems
7	Unit – 2	Hypothesis: Meaning and characteristics of a good hypothesis – Types - Sources and Functions of Hypotheses, Reviewing the Literature: Purpose of Review - Sources of Review
6	Unit -3	Meaning and Need for sampling - Fundamentals of sampling- Factors influencing decision to sample
9	Unit – 3	Types of Sampling: Probability and Non probability- Probability Sampling: Simple random, stratified random and area cluster sampling - Non probability sampling: Quota, Accidental, Judgemental or purposive, systematic and snowball sampling
8	Unit – 4	Primary data: Questionnaire and schedule – Interview - Observation as a tool of Data Collection
8	Unit - 4	Difference between Participant observation and non-participant observation -Rating Scale, Secondary data: Sources
8	Unit - 5	Meaning- General purpose of writing a research report-of a research report, Styles of writing a research report
6	Unit - 5	Types of research reports- Precautions in writing research report

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

B.Sc Degree Program in Psychology
Teaching Plan (Even Semester – 2022-2023)

Class: B.Sc Psychology – III Year

Semester V

Subject Code: 19UEPSC4 Name of the Subject : Experimental Psychology II

Subject in charge: Mrs. Gandhijayanthi

HOURS		Topics to be covered
5		Eysenck's Personality Questionnaire
5		Self-esteem Inventory
5		Record Submission
5		Davidson's Battery of Differential Aptitude Test
5		Thurstone's Interest schedule
5		Record Submission
5		Achievement Motivation
5		Record Submission
5		Student Stress Scale
5		Coping Scale
5		Job Satisfaction
5		Record Submissio
5		Religious Attitude Scale
5		Creativity Questionnaire
5		Record Submission

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

B.Sc Degree Program in Psychology

Teaching Plan (Odd Semester – 2022-2023)

Class: B.Sc Psychology – III Year

Semester V

Subject Code: 19UEPSE1 Name of the Subject : Organizational Psychology

Subject in charge: Mrs. Pinky

HOURS	Unit	Topics to be covered
4	Unit – 1	Introduction: Definition and scope of Organizational psychology
6	Unit – 1	Historical development of organizational psychology, Challenges and Opportunities for organizational Behavior
7	Unit -2	Definition of Learning, Theories of Learning
8	Unit – 2	Shaping, Use of Learning in Organization Setup.
10	Unit – 3	Definition of Motivation, Early theories of motivation-Hierarchy of Needs Theory, Theory X and Theory Y, Two factor Theory and McClelland's Theory of Needs
10	Unit – 3	Contemporary Theories of Motivation- Cognitive Evaluation Theory, Goal Setting Theory, Self-Efficacy Theory, Reinforcement Theory and Equity Theory.
6	Unit – 4	Definition of leadership, Leadership theories- Trait theories, Behavioral Theories.
4	Unit – 4	Contingency Theories, Leader member Exchange (LMX) Theory and Decision Theory
10	Unit – 5	Definition of Attitudes, Components of Attitude, Major Job attitudes, attitudes and Behavior.
10	Unit – 5	Definition of Job satisfaction, Measurement of Job Satisfaction, Causes of Job satisfaction. The impact of Satisfied and Dissatisfied Employees on the workplace

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

DEPARTMENT OF PSYCHOLOGY
DR. AMBEDKAR GOVERNMENT ARTS COLLEGE(A), VYASARPADI,
CHENNAI- 39

DEPARTMENT OF STATISTICS

SUBJECT: Probability Theory

Semester - II

Staff Handled : Prof. K. Gokila & Dr. R. Lakshmi Priya

Week	Topics	Remark
Week 1	Introduction of Probability and terminology. Definition of Random experiment , Sample point, Sample space ,Events . Theorems on Algebra of events and Operations on events	
Week 2	Concept of Classical and statistical approach to probability. Concept of axiomatic approach to probability and Problems.	
Week 3	Additional problems in probability axioms and concepts	
Week 4	Definition of Conditional Probability- problems	
Week 5	Addition–Multiplication theorem – concept and Problems	
Week 6	Baye’s theorem- applications - Problems.	
Week 7	Discrete Random variables - Probability mass function – calculation of Distribution function and Examples	
Week 8	Continuous Random variable: Calculation of Distribution function with Examples.	
Week 9	Mathematical Expectation and their properties with some examples. Proof of Cauchy Schwartz inequality.	
Week 10	Definition of Moment generating function, Characteristic function and Cumulant generating functions. Discuss their properties	
Week 11	Calculation of Moment generating function, Characteristic function and cumulant generating for discrete and continuous distributions.	
Week 12	Moment generating function, Characteristic function and Cumulant generating functions for discrete and continuous distributions. Proof of Chebyshev’s Inequality and problems.	
Week 13	Bi-variate distributions: Probability mass function (p.m.f) and Probability density function (p.d.f.). Calculation of Cumulative distribution function (c.d.f.) with some problems.	
Week 14	Discuss the concept of Marginal and Conditional expectation and their properties	
Week 15	Calculation of Marginal and Conditional expectation and their properties with some Problems.	

Staff Handled : Prof. K. Gokila & Prof. T.Uma

Week	Topics	Remark
Week 1	Normal distribution: Definition, limiting form of Binomial distribution, calculation of mode and median- chief characteristics.	
Week 2	Normal distribution: Calculation of moments, M.G.F, Characteristic function and cumulants. Recurrence relationship between the moments. Concept of additive property of normal variates.	
Week 3	Concept of Standard Normal variable and its uses. Explanation of Area Property. Calculation with area property of Normal distributions. Simple problems	
Week 4	Rectangular (Uniform) distribution: Definition, Calculation of Distribution function, Calculation of moments raw and central moments, M.G.F, Characteristic function.	
Week 5	Exponential distribution : : Definition, Calculation of Distribution function, Calculation of moments raw and central moments, M.G.F, Characteristic function.	
Week 6	Additive property of Exponential variates. Some theorems related with Exponential distribution. Additional problems.	
Week 7	Gamma distribution: Definition, Calculation of Distribution function, Calculation of moments raw and central moments, M.G.F, Characteristic function.	
Week 8	Additive property of Two Gamma variates. Limiting form of gamma distribution.	
Week 9	Additional problems.	
Week 10	Beta distribution of first kind: Calculation of MGF and Constants.	
Week 11	Beta distribution of second kind: Calculation of MGF and Constants.	
Week 12	Derivation of Students t distribution. Calculation of moments, MGF Graph of t-distribution. Limiting form of t – distribution. Applications of t- distribution.	
Week 13	Derivation of Snedecors F distribution. Calculation of moments and MGF. Calculation of constants. Applications of F-distribution.	
Week 14	Relationship between t. F and χ^2 distributions	
Week 15	Derivation of Chi-square distribution. Calculation of moments and MGF, Additive property and applications of Chi-square distribution.	

Staff Handled : Dr. R. Lakshmi Priya

Week	Topics	Remark
Week 1	Introduction of Sample survey, Principal steps in a sample survey, Designing, Organization, execution and principles a sample survey.	
Week 2	Concept of Pilot survey. Sampling Vs Complete Census. Types of sampling	
Week 3	Sampling errors vs Non sampling errors. Concept of Standard error. Advantages and limitations of a sample survey.	
Week 4	Introduction of probability sampling, Terms of Sampling theory from finite population. Simple random sampling with and without replacement - Properties - Unbiased estimate of the mean.	
Week 5	Advantages and disadvantages of SRSWOR and SRSWR. variance and mean finite population correction - Estimation of standard error from a sample.	
Week 6	Relative precision of SRSWOR over SRSWR. Determination of sample size. Problems of SRSWOR an SRSWR.	
Week 7	Concept of Stratified random sampling, Advantages and limitations, Properties, Unbiased estimates of mean and variance .	
Week 8	Estimates of the mean, Concept of allocations, calculation of variance by optimum and proportional allocations and variance of the sample mean with cost function.	
Week 9	Comparison of the variances by various allocations in Stratified random sampling. Simple problems.	
Week 10	Relative precision of a stratified sampling and simple random sampling.	
Week 11	Estimation of gain in precision in stratified sampling and simple Problems.	
Week 12	Additional problems in SRSWOR and Stratified RS.	
Week 13	Concept of Systematic sampling, Properties – Estimate of mean and variance of the estimated mean.	
Week 14	Systematic sampling – Properties – Estimate of mean and variance of the estimated mean, Systematic sampling in the presence of general linear trend.	
Week 15	Merits and demerits of systematic sampling. Comparison of simple and stratified with systematic random sampling. Problems.	

Subject : TESTING OF STATISTICAL HYPOTHESES**Semester - VI**

Staff Handled : Prof. K. Gokila

Week	Topics	Remark
Week 1	Introduction of Statistical testing, Notations and terminology. Statistical Hypothesis, Null and Alternative Hypotheses, Simple and Composite hypotheses, Critical region ,Type-I and Type-II error, Uses of testing of hypothesis.	
Week 2	Sampling distribution, standard error , Calculation of Most Powerful test , Uniformly Most powerful test. Simple problems.	
Week 3	Proof of Neyman-Pearson Lemma and Simple problems.	
Week 4	Concept of Likelihood ratio test procedure, properties – Tests for mean of normal population.	
Week 5	Likelihood ratio test procedure: Test for variance of a normal population.	
Week 6	Likelihood ratio test procedure: merits and demerits, additional problems	
Week 7	Large Sample Tests: single mean, difference between two means and problems.	
Week 8	Large Sample Tests: single proportion, Equality of two proportions and problems.	
Week 9	Large Sample Tests: single variance, Equality of two variances, correlation coefficient and problems.	
Week 10	Small sample tests: Single mean, difference between means based on sample(s) form normal population(s) and problems	
Week 11	Small sample tests: Single variance, ratio of variances based on sample(s) form normal population(s). Tests for co-efficient of correlation and problems.	
Week 12	Chi-square Tests: Tests for association, independence and goodness of fit and problems.	
Week 13	Non-Parametric tests: Sign, Median, Mann- Whitney U-test and problems	
Week 14	Non-Parametric tests: Wilcoxon – signed rank tests , Run tests and	

	simple problems	
Week 15	Non-Parametric tests: Kolmogrov Smirnov Tests one sample and two sample problems.	

Staff Handled : Prof. T.Uma

Week	Topics	Remark
Week 1	Introduction of Time series, Components of time series, Additive and multiplicative models and applications of time series.	
Week 2	Measurement of trend: Free hand and Semi average method. Problems.	
Week 3	Measurement of trend: Moving average method and Least square method. Problems.	
Week 4	Measurement of seasonal variations: Simple average method and Ratio to trend method. Problems.	
Week 5	Measurement of seasonal variations: Ratio to moving average method Problems.	
Week 6	Measurement of seasonal variations: Link relative method - Problems.	
Week 7	Index Numbers: Weighted and Unweighted, Uses, Classification - Construction of Laspeyre's, Paasche's and Fisher's price index numbers. Problems.	
Week 8	Index Numbers: Marshall- Edgeworth, Kelly's and Darbish-Bowley, Problems.	
Week 9	Calculation for good Index number by Time reversal test and factor reversal test. Problems.	
Week 10	Quantity Index numbers: Laspeyre's, Paasche's and Fisher's quantity index numbers. Problems.	
Week 11	Quantity Index numbers: Fixed and Chain base index numbers - Optimum test for index numbers . Problems.	
Week 12	Quantity Index numbers: Marshall- Edgeworth, Kelly's and Darbish-Bowley Cost of living index numbers. Problems.	
Week 13	Official Statistics: Statistical System in India CSO and NSSO and its functions , Introduction about Ministry of Statistics and Planning.	
Week 14	Official Statistics: Present structure of the Indian statistical system - Functions of a statistical system	
Week 15	Agricultural statistics, Industrial statistics , Trade statistics, Labour statistics , Transport and Communication statistics , Examples.	

Subject : **Stochastic Process**

Semester - VI

Staff Handled : Prof. M. Sathiyamurthy

Week	Topics	Remark
Week 1	Introduction to Stochastic Process, Basic Concepts , Definition and examples of stochastic process,	
Week 2	Classification of general stochastic processes into discrete and continuous time, discrete and continuous state spaces, types of stochastic processes, elementary problems.	
Week 3	Introduction to Markov chains, Definition and examples of Markov chain-Transition Probability Matrix	
Week 4	Chapman Kolmogorov equation, classification of states, Problems for finding recurrence.	
Week 5	Problem for finding Ergodic states in a Transition Probability Matrix	
Week 6	Problem for finding periodicity of states in a given Transition Probability Matrix.	
Week 7	Basic limit theorem of Markov chain and its problems	
Week 8	stationary probability distribution and its applications.	
Week 9	Problems in stationary probability distribution	
Week 10	Markov Process with discrete state space, Poisson Process, definition, Postulates , Properties of Poisson Process.	
Week 11	Markov Process with discrete state space: Pure birth process and its applications.	
Week 12	Markov Process with discrete state space: Birth and death Process, Extinction Probability and its applications.	
Week 13	Markov Process with discrete state space: Birth and death Process, Extinction Probability and its applications.	
Week 14	Markov Process with discrete state space: Yule – Furry process and its applications.	
Week 15	Markov Process with discrete state space: Yule – Furry process and its applications.	

Subject : Real Analysis and Matrix Algebra**Semester - II**

Staff Handled : Prof. M. Sathiyamurthy & Prof. D. Shanmugam

Week	Topics	Remark
Week 1	Introduction of functions, Classification of functions, Equivalence, countability, Least Upper Bound, Greatest Lower Bound and theorems.	
Week 2	Sequences of Real Numbers: Definition of Sequence and Subsequence, Limit of a Sequence, Convergent Sequences, Theorems and problems on Convergent Sequence.	
Week 3	Divergent Sequences, Bounded Sequences, Monotone Sequences. Theorems and problems on Divergent Sequences, Bounded Sequences, Monotone Sequences	
Week 4	Sequences of Real Numbers: Operations on Convergent Sequences, and problems.	
Week 5	Operations on Divergent Sequences, limit Superior and Limit Inferior, Cauchy Sequences. Related theorems and problems.	
Week 6	Series with Non – Negative Terms, Alternating Series, Conditional Convergence and Absolute Convergences and problems	
Week 7	Riemann Integral: Definition, properties, Derivatives, Rolle's Theorem and problems	
Week 8	Darboux Property, The Law of Mean, Fundamental Theorems of Calculus- First and second	
Week 9	Improper integrals and problems	
Week 10	Theory of Matrices: Definition, Types of matrices- square, Row, Column, Diagonal, Scalar, and Unit Matrix	
Week 11	Calculation of Transpose and Conjugate of Matrix, Symmetric, Skew symmetric and Hermitian matrix. Singular, Non- singular and Orthogonal Matrix	
Week 12	Matrix multiplication and Determinant of the matrix and problems	
Week 13	Rank of a matrix, Elementary transformations, Working rule to find the Rank of a matrix, calculation of ranks.	
Week 14	Vectors: Linear dependence and independence of vectors- Consistency of non- homogeneous linear equations- Homogeneous equations- Eigen values and eigen vectors	
Week 15	Cayley –Hamilton theorem , Inverse of a matrix and its problems	

Staff Handled : Prof. M. Sathiyamurthy & Prof. D. Shanmugam

Week	Topics	Remark
Week 1	Finite differences, forward and backward differences, various operators and their basic properties and problems.	
Week 2	Interpolation with equal intervals: Newton's forward differences and simple problems.	
Week 3	Interpolation with equal intervals: Newton's backward differences and simple problems.	
Week 4	Interpolation with unequal intervals: Divided differences and their properties.	
Week 5	Newton's divided differences for interpolation and problems.	
Week 6	Lagrange's formula for interpolation and problems.	
Week 7	Central difference interpolation formula: Gauss forward and backward differences formula and problems.	
Week 8	Stirling and Bessel's central difference formula and problems.	
Week 9	Everett's central difference formula and problems.	
Week 10	Inverse interpolation: Lagrange's method and problems.	
Week 11	Inverse interpolation: iteration of successive approximation method and problems.	
Week 12	Numerical differentiation- Numerical differentiation upto 2 nd order only and problems.	
Week 13	Numerical intergration:-Trapezoidal rule, simpsons 1/3 rd and 3/8 th rules and problems.	
Week 14	Weddle's rule, Euler's summation formula and problems.	
Week 15	Numerical method of solution of ordinary differential equations- Taylor's series method-Euler method and problems	

SUBJECT: BUSINESS STATISTICS (BBA)**Semester - IV**

Staff Handled : Prof. D. Shanmugam

Week	Topics	Remark
Week 1	Correlation Analysis – Definition – Types – properties, simple problem	
Week 2	Scatter diagram – Karl Pearson's Correlation Coefficient– definition, diagram, simple problem	
Week 3	Spearman's Rank Correlation Coefficient – definition, properties, simple problem.	
Week 4	Regression Analysis – Definition – methods – Properties	
Week 5	Regression equations – definition, simple problem	
Week 6	Regression lines – properties – Related simple problem	
Week 7	Time Series – Definition – Components – Measurement of Trend – Definition, diagram, theoretical question, simple problem	
Week 8	Graphical method, Semi average method, Moving average method– definition, graphical methods, simple problem	
Week 9	Method of Least squares – Measurement of Seasonal Variations – definition, problem	
Week 10	Index Numbers – Definition – Methods	
Week 11	Test for Index Numbers – Cost of living Index Number – Concepts and Simple Problems	
Week 12	Chain base method – Uses of Index Numbers – Simple problems	
Week 13	Concept of Sampling – Methods of Sampling – definition, theoretical question	
Week 14	Random Sampling – Stratified Sampling – definition, theoretical question	
Week 15	Systematic Sampling – Sampling Error – Non sampling Error. – definition, theoretical question	

SUBJECT: STATISTICS IN REAL LIFE**Semester - II**

Staff Handled : Prof. D. Shanmugam

Week	Topics	Remark
Week 1	Time Series : Introduction - Definition – uses	
Week 2	Components of time series – free hand method – Methods of semi averages – Moving average method – definition, theoretical question, simple problem	
Week 3	3 yearly moving average – 5 yearly moving averages –definition, simple problems only	
Week 4	Official Statistics: Present official statistical systems in India – uses, theoretical question	
Week 5	Ministry of Statistics and Programme implementation - uses, theoretical question	
Week 6	NSSO, CSO and their functions – uses, theoretical question	
Week 7	Definitions : Registration of vital events – National Income Statistics – uses, theoretical question	
Week 8	Agricultural Statistics – Industrial Statistics in India – Trade Statistics in India – uses, theoretical question	
Week 9	Labour Statistics in India – Financial Statistics in India – uses, theoretical question	
Week 10	Index numbers: Index numbers and their definitions - construction and uses of fixed and chain based index numbers– uses, theoretical question, simple problems	
Week 11	simple and weighted index numbers - Laspeyre's, Paasche's, Fisher's, and Marshall-Edgeworth index numbers – uses, theoretical question, simple problems	
Week 12	optimum tests for index numbers-Cost of living index numbers (simple problems only), uses, theoretical question, simple problems	
Week 13	Statistical quality control – definition of quality - uses, theoretical question,	
Week 14	need for quality control in industry – definition, uses, theoretical questions	
Week 15	control charts – Mean chart and Range chart – definition, uses, theoretical questions, simple problems	

Staff Handled : Prof. M. Sathiyamurthy & Prof. D. Shanmugam

Week	Topics	Remark
Week 1	Introduction to “C”, variables, data types- definition, theoretical questions	
Week 2	declarations, type conversions, increment and decrement – definition, theoretical questions	
Week 3	Bitwise, Logical and Assignment operators – definition, theoretical questions, example	
Week 4	Expression and conditional expressions, control structures, If-Else, SWITCH, WHILE, FOR and DO WHILE loop structures – definition, syntax, flowchart diagram, theoretical questions, example	
Week 5	Break continue, GO and Goto statements. Function, function returning – definition, syntax, flowchart diagram, theoretical questions, example	
Week 6	Non-integers, Function arguments -Static and register variables – definition, theoretical questions, example	
Week 7	Arrays and Strings-Array Declaration, Multi dimensional Arrays – definition, theoretical questions, example	
Week 8	Strings/Character Arrays, Array initialization-Pointers and addresses – definition, theoretical questions, example	
Week 9	Pointers and Arrays-Pointer to function – definition, theoretical questions, example	
Week 10	Structures and functions, Array of structures Fields – definition, theoretical questions, example	
Week 11	Unions-type definition – definition, theoretical questions, example	
Week 12	standard input and output –formatted output – definition, theoretical questions, example	
Week 13	File Access, File handling in C-File descriptions – definition, theoretical questions, example	
Week 14	Error handling-‘Low level i/o-Read and Write’ – definition, theoretical questions, example	
Week 15	Open, Create, Close, Unlike - Random Access-seek and lseek – definition, theoretical questions, example	

Subject: Operations Research (B.COM)**Semester - II**

Staff Handled : Prof. T.Uma

Week	Topics	Remark
Week 1	Introduction to Operations Research , Meaning , Scope of OR	
Week 2	Models and Limitations of O.R	
Week 3	Introduction of Linear Programming Problem , Mathematical Formulation	
Week 4	Linear Programming Problem: Solution procedure of Graphical method and problems	
Week 5	Linear Programming Problem: Concept of Simplex method and its problems.	
Week 6	Linear Programming Problem: Problem in Simplex method	
Week 7	Transportation Problem: Formulation, North West Corner and problems	
Week 8	Transportation Problem: Least Cost Method and problem.	
Week 9	Transportation Problem: Vogel's Approximation method and problem.	
Week 10	Assignment problem: Formulation , Hungarian method of Assignment	
Week 11	Assignment problem: Maximization case problems.	
Week 12	Assignment problem: Minimization case problems.	
Week 13	Network analysis : Calculation of CPM	
Week 14	Network analysis : EST -EFT -LST -LFT and Total Float. Calculation of PERT and problem	
Week 15	Difference between PERT and CPM . Additional problems	

SUBJECT: QUANTITATIVE TECHNIQUES**FOR BUSINESS DECISIONS****Semester - II**

Staff Handled : Dr. R. Lakshmi Priya & Prof. M. Sathiyamurthy

Week	Topics	Remark
Week 1	Meaning , scope and limitations of quantitative techniques, uses of quantitative techniques in business decisions	
Week 2	Concepts of Probability , definition of Probability, sample space, addition theorem of probability , multiplication theorem and its problems	
Week 3	Concept of Conditional probability, Baye's theorem and problems.	
Week 4	Binomial distribution: MGF, Constants and problems	
Week 5	Poisson distribution: MGF, Constants and problems	
Week 6	Normal distribution : MGF, Constants and problems. Fitting and testing the Goodness of fit	
Week 7	Concept of statistical inference, Testing of Statistical hypothesis , Terminology : Null – Alternative hypothesis- type I and type II error	
Week 8	Large Sample test: Procedure for Test for single Mean and problems	
Week 9	Large Sample test: Procedure for Test for difference of means and problems	
Week 10	Significance tests in Small samples: Procedure and problems for Testing the significance of the mean , Testing difference between means of two samples and F- test .	
Week 11	Chi square test: Procedure and problems for independence of Attributes	
Week 12	Analysis of Variance: Assumptions, One way and two way classifications. Problems.	
Week 13	Decision Theory : Meaning, Definitions,Uncertainty – pay offs – Expected opportunity loss (EOL) – Maximin principle – Minimax principle –Bayes principle. construction of Decision tree analysis.	
Week 14	Interpolation: Binomial expansion method and Newton's forward problems	
Week 15	Interpolation: Problems in Newton's backward method. Problems in Extrapolation	

DEPARTMENT OF STATISTICS – LESSON PLAN - ODD SEMESTER**SUBJECT: DESCRIPTIVE STATISTICS****SEMESTER: I****Staff Handled :** Prof. K. Gokila & Dr. R. Lakshmi Priya

Week	Topics	Remark
Week 1	Introduction to Statistics, Definition, Function, Application, Limitations, Primary and Secondary data. Methods of Collecting Primary Data	
Week 2	Preparation of Questionnaire and Schedule, Sources of Secondary Data	
Week 3	Measurement of Scale, Classification and Tabulation Objects and Types of Classification, Formation of a Discrete and Continuous Frequency Distribution, Tabulation of Data, Parts of a Table, General Rules and Types of Tables.	
Week 4	Diagrammatic and Graphical Representation – Introduction, Significance of Diagrams and Graphs, General Rules for Constructing Diagrams	
Week 5	Types of Diagrams, Graphs and Graphs of Frequency Distribution, Box Plot	
Week 6	Measures of Central Value – Introduction, Types of Averages, Arithmetic Mean, Median, Mode, Geometric Mean, Harmonic Mean, Relationship Among the Averages	
Week 7	Measures of Dispersion – Inter quartile Range or the Quartile Deviation and its Coefficient	
Week 8	Mean Deviation and its Coefficient, Standard Deviation, Coefficient of Variations, Lorenz Curve.	
Week 9	Skewness, Moments and Kurtosis – Introduction, Measures of Skewness, Moments and Measures of Kurtosis	
Week 10	Correlation – Introduction, Types of Correlation, Methods of Studying Correlation – Scatter Diagram Method, Karl Pearson's Coefficient of Correlation, Coefficient of Determination, Properties of the Coefficient of Correlation	
Week 11	Rank Correlation Coefficient, Concurrent Deviation Method, Multiple and Partial Correlation , Concepts and Simple Problems	
Week 12	Regression – Introduction, Uses of Regression, Difference Between Correlation and Regression Analysis, Regression Lines, Regression Equations, Regression Equations for grouped data, Limitations of Regression Analysis	
Week 13	Curve Fitting – Introduction, Principle of Least Squares, Fitting a Straight Line, Fitting a Second Degree polynomial, Fitting a Curve of the Form $Y = ae^{bx}$, Fitting a Curve of the Form $Y = ab^x$, Fitting a Curve of the Form $Y = ax^b$	
Week 14	Association of Attributes – Introduction, Difference between Correlation and Association, Notation and Terminology, Consistency of Data, Association and Disassociation	
Week 15	Methods of Studying Association, Association of Two Attributes, Partial Association.	

Staff Handled : Staff Handled : Prof. K. Gokila & Prof. T.Uma

Week	Topics	Remark
Week 1	Discrete Uniform distribution : Definition, calculation of raw and central moments, M. G. F, Characteristic function and Problems. Definition of Bernoulli distribution.	
Week 2	Bernoulli distribution: Definition, calculation of raw and central moments moments, M. G. F, Characteristic function, cumulant generating function and additive property. Binomial distribution: Definition and moments. Calculation of M.G.F	
Week 3	Binomial distribution: Calculation of Characteristic function, cumulant generating function and additive property. The recurrence relationship between moments – Problems related with Binomial distribution. Concept of Fitting of Binomial distribution.	
Week 4	Poisson distribution: Definition-calculation of raw and central moments- recurrence relationship between moments - M.G.F- Characteristic function and cumulants - additive property.	
Week 5	Negative Binomial distribution: Definition-calculation of raw and central moments- M.G.F- Characteristic function and cumulants.	
Week 6	The concept of fitting of Poisson and fitting of Negative Binomial distribution.	
Week 7	Geometric distribution: Definition-calculation of raw and central moments- M.G.F- Characteristic function and cumulants.	
Week 8	Geometric distribution: Lack of memory and their Problems	
Week 9	Additional problems with Geometric distribution	
Week 10	Partial correlation: Definition, properties and Calculation from simple correlation	
Week 11	Multiple correlation: Definition, properties and Calculation from simple correlation	
Week 12	Regression : Definition, Importance and applications, Concept of two regression lines, calculation of two regression lines, Properties of regression co-efficients.	
Week 13	Concept of WLLN. Importance of Central Limit Theorem. Explanation of various central limit theorems (statement only)	
Week 14	Limiting distributions: Relationship between Poisson distribution and Binomial distribution. Relationship between Poisson distribution and Negative Binomial distribution	
Week 15	Convergence: Limiting concept of Binomial distribution to Poisson and Negative binomial distribution. Additional problems.	

SUBJECT: STATISTICAL ESTIMATION THEORY**SEMESTER: V****Staff handled:** Prof. M. Sathiyamurthy

Week	Topics	Remark
Week 1	Introduction to estimation theory, notations and terminology, types of estimation. Point Estimation: Characteristics of good Estimators, Properties and unbiasedness. problems in unbiasedness property.	
Week 2	Concept of Consistency, theorems and problems in Consistency	
Week 3	Additional theorems and problems in unbiasedness and consistency.	
Week 4	Concept of Efficiency and Most efficient estimator. Problems to identify most efficient estimators.	
Week 5	Concept of likelihood function. Sufficient statistics: Definition , Neyman-Fisher Factorization theorem , theorems based on sufficient statistics.	
Week 6	Sufficient statistics for various parameters in various distribution, Simple problems.	
Week 7	Concept of Minimum variance unbiased estimators, Theorems on MVUE	
Week 8	Regularity conditions of Cramer – Rao Inequality and proof of the theorem, simple problems	
Week 9	Concept of Rao- Blackwellization, proof of the theorem. Applications and simple problems.	
Week 10	Various methods of Estimation, Method of Maximum likelihood Estimation, Properties of MLE, problems of finding MLE for the parameter of Bernoulli, Binomial and Poisson distribution.	
Week 11	Problems of finding MLE for the parameter of Exponential, Uniform and Normal distribution.	
Week 12	Method of moments and method of Least square. Problems based on the mentioned methods	
Week 13	Method of minimum Chi-square and method of minimum variance. Problems based on the mentioned methods	
Week 14	Concept of Interval Estimation, Definition of interval estimator, confidence coefficient, confidence limits, pivotal quantity. Confidence Interval for proportion(s) based on Normal, simple problems.	
Week 15	Confidence Interval for mean(s) and variance(s) based on Normal and simple problems.	

SUBJECT: DESIGN OF EXPERIMENTS**SEMESTER: V****Staff Handled :** Dr. R. Lakshmi Priya

Week	Topics	Remark
Week 1	Introduction to Design of Experiments, Basic Principles, Replication, Randomization and Local Control Techniques.	
Week 2	Concept and properties for size of experimental unit, Methods of determination of experimental units .	
Week 3	Introduction of ANOVA. Assumptions and Concept of One-way classification, problems in One way ANOVA.	
Week 4	Assumptions and Concept of two-way classification, problems in two way ANOVA.	
Week 5	Multiple range tests: Newman Keul's test, Duncan's multiple range test and Tukey's test . Simple problems.	
Week 6	Concept of Transformations Square root, Angular and Log transformations. Simple Problems.	
Week 7	Concept of Linear Model and its classifications. Concept of Completely Randomized Design (CRD) and its analysis. Problems in CRD	
Week 8	Concept of Randomized Block Design (RBD) and its analysis. Problems in RBD	
Week 9	Concept of Latin Square Design(LSD) and its analysis. Problems in LSD	
Week 10	Concept of missing plot technique, Least square method of estimating missing single Observations and two observations.	
Week 11	Problem of missing single Observations and two observations in CRD and RBD.	
Week 12	Problem of missing single Observations and two observations in LSD	
Week 13	Introduction to Factorial experiments, Analysis of 2^2 factorial experiment and problems	
Week 14	Analysis of 2^3 factorial experiment and problems	
Week 15	Analysis of 3^2 factorial experiments and problems	

Staff Handled : Dr. R. Lakshmi Priya

Week	Topics	Remark
Week 1	Introduction to SQC, Scope and need in Industry, advantages and limitations, Causes of Quality variation	
Week 2	Concept of Statistical process control charts, Uses of the Shewhart - control chart, Specification and tolerance limits - 3 sigma limits - warning limits.	
Week 3	Concept of $\bar{X}$ and R chart. Purpose of $\bar{X}$ and R chart. Problems in $\bar{X}$ and R chart.	
Week 4	Concept of σ and s – chart, Purpose of σ and s – chart. Problems in σ and s - chart	
Week 5	Basis of sub grouping - plotting X and R results - Determining the trial control limits. Interpretation of control charts X and R	
Week 6	Applications of various control charts with simple problems.	
Week 7	Introduction of control chart for attributes, Concept and purpose, construction of p chart. Applications of p chart. Problems in p chart	
Week 8	Concept and purpose, construction of p chart. Applications of p chart. Problems in np chart.	
Week 9	Concept and purpose, construction of c-chart. Applications of c-chart. Problems in c chart.	
Week 10	Acceptance of sampling plans for attributes, Producer's risk and consumer's risk, Concepts of AQL, LTPD, AOQ, AOQL, ATI and ASN.	
Week 11	Concept of Single sampling plan, OC, AOQ, ATI curves. Problem of Single sampling plan.	
Week 12	Concept of Double and Multiples sampling plans, OC, AOQ, ATI curves. Problem of double and Multiples sampling plans.	
Week 13	Concept of variable sampling plans , Sigma known, OC curve , Problems.	
Week 14	Concept of variable sampling plans , Sigma un known, OC curve, Problems.	
Week 15	Determination of n and k for one sided specification, OC curve, Problems.	

Staff Handled : Prof. K. Gokila

Week	Topics	Remark
Week 1	Sources of Demographic data , Civil Registration and Population Census	
Week 2	Measurement of Population, Rates and Ratios of vital events.	
Week 3	Measurement of Population, Rates and Ratios of vital events.	
Week 4	Mortality measurements: Crude Death rate and Specific Death rate. Merits and Demerits. Related simple problems	
Week 5	Infant Mortality rate and Standardized Death rate, Merits and Demerits . Direct and Indirect methods of standardisation Related simple problems	
Week 6	Infant Mortality rate and Standardized Death rate, Merits and Demerits . Direct and Indirect methods of standardization. Related simple problems	
Week 7	Concept of Fertility , Measures of fertility, Crude Birth rate and General fertility rate, merits and demerits. Related simple problems	
Week 8	Measures of fertility: Age Specific Fertility rate and Total fertility rate. Merits and demerits. Related simple problems	
Week 9	Measurement of population growth- Pearle's vital index. Net reproduction rate- Gross reproduction rate. Related simple problems	
Week 10	Concept of Life table, assumptions and Structure	
Week 11	Construction of life table, Relationship between function of the life table	
Week 12	Uses of Life table , abridged life table (Concept only) and simple problems	
Week 13	Stationary Population: Definition and examples	
Week 14	Stable Population and Force of Mortality (Definition only) -	
Week 15	Gompertz and Makchamlaw and its uses	

SUBJECT : MATHEMATICS FOR STATISTICS**SEMESTER: I****Staff Handled :** Prof. M. Sathiyamurthy & Prof. D. Shanmugam

Week	Topics	Remark
Week 1	Introduction to Partial fractions, definition and problems	
Week 2	Series: Definition of Binomial series and problems	
Week 3	Series: Definition of Exponential series & Logarithmic series and problems	
Week 4	Introduction of Polynomial and roots, relation between roots and coefficients and problems for finding roots with degree of order polynomial equation.	
Week 5	Problems for finding roots with degree of order three polynomial equation.	
Week 6	Problems for finding roots with degree of order four polynomial equation.	
Week 7	Differentiation, definition, Problems in Product rule and quotient rule	
Week 8	Differentiation: Problems in function of function rule and logarithmic differentiation.	
Week 9	Differentiation: Problems with implicit function.	
Week 10	Integration: definition, simple problems	
Week 11	Integration by parts and problems	
Week 12	Integration by Substitution I,II and III and problems	
Week 13	Introduction of Gamma function, theorems and problems	
Week 14	Introduction of Beta I and Beta II function, theorems and problems	
Week 15	Relationship between Beta and Gamma function and problems	

Staff Handled : Prof. M. Sathiyamurthy & Prof. D. Shanmugam

Week	Topics	Remark
Week 1	Introduction to “C”, variables, data types- definition, theoretical questions	
Week 2	declarations, type conversions, increment and decrement – definition, theoretical questions	
Week 3	Bitwise, Logical and Assignment operators – definition, theoretical questions, example	
Week 4	Expression and conditional expressions, control structures, If-Else, SWITCH, WHILE, FOR and DO WHILE loop structures – definition, syntax, flowchart diagram, theoretical questions, example	
Week 5	Break continue, GO and Label statements. Function, function returning – definition, syntax, flowchart diagram, theoretical questions, example	
Week 6	Non-integers, Function arguments -Static and register variables – definition, theoretical questions, example	
Week 7	Arrays and Strings-Array Declaration, Multi dimensional Arrays – definition, theoretical questions, example	
Week 8	Strings/Character Arrays, Array initialization-Pointers and addresses – definition, theoretical questions, example	
Week 9	Pointers and Arrays-Pointer to function – definition, theoretical questions, example	
Week 10	Structures and functions, Array of structures Fields – definition, theoretical questions, example	
Week 11	Unions-type definition – definition, theoretical questions, example	
Week 12	standard input and output –formatted output – definition, theoretical questions, example	
Week 13	File Access, File handling in C-File descriptions – definition, theoretical questions, example	
Week 14	Error handling-‘Low level i/o-Read and Write’ – definition, theoretical questions, example	
Week 15	Open, Create, Close, Unlike - Random Access-seeking and lseek – definition, theoretical questions, example	

Staff Handled : Prof. D. Shanmugam

Week	Topics	Remark
Week 1	Nature and scope of statistical methods – Limitations – Preparation of Questionnaire and schedule– Definition, importance, processing and analyzing of data preparation of report, theoretical questions	
Week 2	Collection of data – primary and secondary data – sources – methods of collection of data, merits and demerits, theoretical questions	
Week 3	Methods of collection of primary and secondary data. Observational studies and sample surveys— theoretical questions	
Week 4	Diagrammatic representation of data – one and two dimensional– Introduction, advantages, limitations of a diagram, rule for making diagram	
Week 5	Bars – Types of Bar diagrams. Graphical representation of data – Introduction, advantages, limitations of a diagram, rule for making diagram	
Week 6	Frequency curve – frequency polygon – Histogram and Ogive curve– Difference between Diagram and Graph, Theoretical questions	
Week 7	Measures of central tendency – Arithmetic Mean – Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 8	Median, Mode– Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 9	Geometric Mean and Harmonic Mean – Merits and Demerits Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 10	Measures of Dispersion – Absolute and Relative measures – Range, Quartile deviation – Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 11	Mean deviation, Standard deviation and its Coefficients Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 12	Measure of Skewness and Kurtosis– Meaning, Definition, merits and demerits, Problems	
Week 13	Fundamental sets of frequencies – Consistency of Data – Introduction, definition	
Week 14	Conditions for consistency – Contingency table – Introduction, definition	
Week 15	Association of attributes– Introduction, definition	

SUBJECT: STATISTICS FOR BEGINNERS**SEMESTER: I**

Staff Handled : Prof. D. Shanmugam

Week	Topics	Remark
Week 1	Introduction of Statistics – Definition – Definition, importance, processing and analyzing of data preparation of report, theoretical questions	
Week 2	Scope of Statistics – Importance, application of statistics, theoretical question	
Week 3	limitations of statistics –theoretical questions	
Week 4	Collection of Data : Data collection – methods of collection of data, merits and demerits, theoretical questions	
Week 5	Primary data – Secondary data – sources of data – methods of collection of data, merits and demerits, theoretical questions	
Week 6	Classification – Tabulation of data – Objects and Types of Classification, Formation of a Discrete and Continuous Frequency Distribution, Parts of a Table, General Rules and Types of Tables.	
Week 7	Presentation of Data : Diagrammatic presentation of data – construction of simple bar – sub divided – multiple bars – pie diagram – pictograms – cartograms	
Week 8	Graphical presentation of Data – Histogram, frequency polygon – frequency curve –advantages, rule for making Graph	
Week 9	Ogives – advantages, rule making Graph	
Week 10	Measures of Central tendency – Arithmetic Mean – Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 11	Median –Mode – Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 12	Geometric Mean – Harmonic Mean – Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 13	Theory of attributes – consistency of data – Introduction, definition, theoretical questions	
Week 14	independence of attributes and Association of attributes – Introduction, definition, properties, theoretical questions	
Week 15	Yule’s coefficient of association – coefficient of colligation – Introduction, definition, theoretical questions, simple problem	

Staff Handled : Prof. T.Uma

Week	Topics	Remark
Week 1	Introduction of Statistics, Definition , Scope , Limitations – Collection of primary and secondary data	
Week 2	Classification and Tabulation of data	
Week 3	Diagrammatic and Graphical representation of statistical data.	
Week 4	Measures of central tendency: Arithmetic Mean, Median, Mode, Geometric Mean and Harmonic Mean, Merits and Demerits.	
Week 5	Calculation of Arithmetic Mean, Median, Mode, Geometric Mean and Harmonic Mean for individual series	
Week 6	Calculation of Arithmetic Mean, Median, Mode, Geometric Mean and Harmonic Mean for discrete series and continuous series	
Week 7	Measures of Dispersion: Absolute and Relative measures – Range, Quartile deviation, Mean deviation, Standard deviation and its Coefficients .Merits and Demerits	
Week 8	Measures of Dispersion:Calculation of Range, Quartile deviation, Mean deviation, Standard deviation and its Coefficients	
Week 9	Measures of Skewness and Kurtosis and its problems.	
Week 10	Correlation: Definition, types, properties, Methods. Problem for finding Karl Pearson's Correlation.	
Week 11	Problem for finding Rank Correlation and Concurrent deviation method	
Week 12	Regression Analysis: Definition and properties, calculation of two regression lines.	
Week 13	Time Series: Definition, Components of Time Series , Measurement of Trend	
Week 14	Measurement of Seasonal variation by various methods and problems.	
Week 15	Index Numbers: Definition, problems in the construction of Index numbers, simple and weighted Index numbers. Test for Index Numbers – Chain base method – Cost of living Index Number – Uses – Simple problem.	

Staff Handled : Dr. R. Lakshmi Priya & Prof. M. Sathiyamurthy

Week	Topics	Remark
Week 1	Introduction to Operations Research, Meaning , definition , origin and history, characteristic feature , need , scope and	
Week 2	Models of O.R and Phases of O.R . Linear Programming Problem(LPP), Meaning, assumptions, applications . Formulation LPP, advantages and Limitations.	
Week 3	Obtaining optimal solution for LPP – Graphical method	
Week 4	Obtaining optimal solution for LPP –Simplex method for Maximization function	
Week 5	Obtaining optimal solution for LPP– Simplex method for Minimization function	
Week 6	Duality in LPP meaning , construction dual LPP and problems	
Week 7	Transportation Problem, meaning -Balanced and Unbalanced problems, Initial Basic Feasible Solution by North West Corner Rule and Least Cost method	
Week 8	Transportation Problem: Initial Basic Feasible Solution by Vogel's Approximation method , Solution by optimality by MODI method	
Week 9	Assignment Problem : Models, Hungarian method and problems	
Week 10	Introduction of Game , meaning , types of games, basic assumptions ,finding value of game for pure strategy, finding saddle point by graphical method and value of the game	
Week 11	Network analysis: Network diagram and critical path method CPM and PERT	
Week 12	Sequencing Problem: Meaning , assumption and 2 machine problems	
Week 13	Queueing theory: Meaning , objectives, limitations, Elements of Queueing system, Characteristics of M/M/1: ∞ /FIFO	
Week 14	Problems in M/M/1: ∞ /FIFO . Problems and Characteristics of M/M/I : N/FIFO	
Week 15	Statistical Quality Control (SQC): Meaning of quality , Quality control, benefits and uses of SQC . Construction of Control charts- X and R chart.	

DEPARTMENT OF STATISTICS

SUBJECT: QUANTITATIVE METHODS

Week	Topics	Remark
Week 1	Nature and scope of statistical methods – Limitations – Preparation of Questionnaire and schedule– Definition, importance, processing and analyzing of data preparation of report, theoretical questions	
Week 2	Collection of data – primary and secondary data – sources – methods of collection of data, merits and demerits, theoretical questions	
Week 3	Methods of collection of primary and secondary data. Observational studies and sample surveys— theoretical questions	
Week 4	Diagrammatic representation of data – one and two dimensional– Introduction, advantages, limitations of a diagram, rule for making diagram	
Week 5	Bars – Types of Bar diagrams. Graphical representation of data – Introduction, advantages, limitations of a diagram, rule for making diagram	
Week 6	Frequency curve – frequency polygon – Histogram and Ogive curve– Difference between Diagram and Graph, Theoretical questions	
Week 7	Measures of central tendency – Arithmetic Mean – Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 8	Median, Mode– Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 9	Geometric Mean and Harmonic Mean – Merits and Demerits Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 10	Measures of Dispersion – Absolute and Relative measures – Range, Quartile deviation – Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 11	Mean deviation, Standard deviation and its Coefficients Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 12	Measure of Skewness and Kurtosis– Meaning, Definition, merits and demerits, Problems	
Week 13	Fundamental sets of frequencies – Consistency of Data – Introduction, definition	
Week 14	Conditions for consistency – Contingency table – Introduction, definition	
Week 15	Association of attributes– Introduction, definition	

SUBJECT: BUSINESS STATISTICS (BBA)

Week	Topics	Remark
Week 1	Correlation Analysis – Definition – Types – properties, simple	

	problem	
Week 2	Scatter diagram – Karl Pearson’s Correlation Coefficient– definition, diagram, simple problem	
Week 3	Spearman’s Rank Correlation Coefficient – definition, properties, simple problem.	
Week 4	Regression Analysis – Definition – methods – Properties	
Week 5	Regression equations – definition, simple problem	
Week 6	Regression lines – properties – Related simple problem	
Week 7	Time Series – Definition – Components – Measurement of Trend – Definition, diagram, theoretical question, simple problem	
Week 8	Graphical method, Semi average method, Moving average method– definition, graphical methods, simple problem	
Week 9	Method of Least squares – Measurement of Seasonal Variations – definition, problem	
Week 10	Index Numbers – Definition – Methods	
Week 11	Test for Index Numbers – Cost of living Index Number – Concepts and Simple Problems	
Week 12	Chain base method – Uses of Index Numbers – Simple problems	
Week 13	Concept of Sampling – Methods of Sampling – definition, theoretical question	
Week 14	Random Sampling – Stratified Sampling – definition, theoretical question	
Week 15	Systematic Sampling – Sampling Error – Non sampling Error. – definition, theoretical question	

SUBJECT: STATISTICS FOR BEGINNERS

Week	Topics	Remark
Week 1	Introduction of Statistics – Definition – Definition, importance, processing and analyzing of data preparation of report, theoretical questions	
Week 2	Scope of Statistics – Importance, application of statistics, theoretical question	
Week 3	limitations of statistics –theoretical questions	
Week 4	Collection of Data : Data collection – methods of collection of data, merits and demerits, theoretical questions	
Week 5	Primary data – Secondary data – sources of data – methods of collection of data, merits and demerits, theoretical questions	
Week 6	Classification – Tabulation of data – Objects and Types of Classification, Formation of a Discrete and Continuous Frequency Distribution, Parts of a Table, General Rules and Types of Tables.	
Week 7	Presentation of Data : Diagrammatic presentation of data – construction of simple bar – sub divided – multiple bars – pie diagram – pictograms – cartograms	
Week 8	Graphical presentation of Data – Histogram, frequency polygon – frequency curve –advantages, rule for making Graph	
Week 9	Ogives – advantages, rule making Graph	
Week 10	Measures of Central tendency – Arithmetic Mean – Meaning, Definition, discrete series, continuous series, merits and demerits,	

	Problems	
Week 11	Median –Mode – Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 12	Geometric Mean – Harmonic Mean – Meaning, Definition, discrete series, continuous series, merits and demerits, Problems	
Week 13	Theory of attributes – consistency of data – Introduction, definition, theoretical questions	
Week 14	independence of attributes and Association of attributes – Introduction, definition, properties, theoretical questions	
Week 15	Yule’s coefficient of association – coefficient of colligation – Introduction, definition, theoretical questions, simple problem	

SUBJECT: STATISTICS IN REAL LIFE

Week	Topics	Remark
Week 1	Time Series : Introduction - Definition – uses	
Week 2	Components of time series – free hand method – Methods of semi averages – Moving average method – definition, theoretical question, simple problem	
Week 3	3 yearly moving average – 5 yearly moving averages –definition, simple problems only	
Week 4	Official Statistics: Present official statistical systems in India – uses, theoretical question	
Week 5	Ministry of Statistics and Programme implementation - uses, theoretical question	
Week 6	NSSO, CSO and their functions – uses, theoretical question	
Week 7	Definitions : Registration of vital events – National Income Statistics – uses, theoretical question	
Week 8	Agricultural Statistics – Industrial Statistics in India – Trade Statistics in India – uses, theoretical question	
Week 9	Labour Statistics in India – Financial Statistics in India – uses, theoretical question	
Week 10	Index numbers: Index numbers and their definitions - construction and uses of fixed and chain based index numbers– uses, theoretical question, simple problems	
Week 11	simple and weighted index numbers - Laspeyre’s, Paasche’s, Fisher’s, and Marshall-Edgeworth index numbers – uses, theoretical question, simple problems	
Week 12	optimum tests for index numbers-Cost of living index numbers (simple problems only), uses, theoretical question, simple problems	
Week 13	Statistical quality control – definition of quality - uses, theoretical question,	
Week 14	need for quality control in industry – definition, uses, theoretical questions	
Week 15	control charts – Mean chart and Range chart – definition, uses, theoretical questions, simple problems	

SUBJECT: ‘C’ Language for Statistics

Week	Topics	Remark
Week 1	Introduction to “C”, variables, data types- definition, theoretical questions	
Week 2	declarations, type conversions, increment and decrement – definition, theoretical questions	
Week 3	Bitwise, Logical and Assignment operators – definition, theoretical questions, example	
Week 4	Expression and conditional expressions, control structures, If-Else, SWITCH, WHILE, FOR and DO WHILE loop structures – definition, syntax, flowchart diagram, theoretical questions, example	
Week 5	Break continue, GO and Label statements. Function, function returning – definition, syntax, flowchart diagram, theoretical questions, example	
Week 6	Non-integers, Function arguments -Static and register variables – definition, theoretical questions, example	
Week 7	Arrays and Strings-Array Declaration, Multi dimensional Arrays – definition, theoretical questions, example	
Week 8	Strings/Character Arrays, Array initialization-Pointers and addresses – definition, theoretical questions, example	
Week 9	Pointers and Arrays-Pointer to function – definition, theoretical questions, example	
Week 10	Structures and functions, Array of structures Fields – definition, theoretical questions, example	
Week 11	Unions-type definition – definition, theoretical questions, example	
Week 12	standard input and output –formatted output – definition, theoretical questions, example	
Week 13	File Access, File handling in C-File descriptions – definition, theoretical questions, example	
Week 14	Error handling-‘Low level i/o-Read and Write’ – definition, theoretical questions, example	
Week 15	Open, Create, Close, Unlike - Random Access-seeking and lseek – definition, theoretical questions, example	

2.3.4 b பாடத்திட்ட செயலாக்கம்

பருவம் I,III,V

2020 ஜூன் - பாடங்கள் அறிமுகம்

2020 ஜூலை - அலகு -1

2020 ஆகஸ்ட் - அலகு -2 முதல் அகமதிப்பீட்டுத்தேர்வு

2020 செப்டம்பர் - அலகு 3&4 ஒப்படை இரண்டாம் அகமதிப்பீட்டுத்தேர்வு

2020 அக்டோபர் - அலகு 5 கருத்தரங்கம் - மாதிரித்தேர்வு

2020 நவம்பர் - பருவத்தேர்வுகள்

பருவம் II,IV,VI

2020 திசம்பர் - பாடங்கள் அறிமுகம் அலகு-1

2020 ஜனவரி - அலகு -2 முதல் அகமதிப்பீட்டுத்தேர்வு

2020 பிப்ரவரி - அலகு 3&4 ஒப்படை இரண்டாம் அகமதிப்பீட்டுத்தேர்வு

2020 மார்ச் - அலகு 5 கருத்தரங்கம் - மாதிரித்தேர்வு

2020 ஏப்ரல் - பருவத்தேர்வுகள்

TAM 2.3.4

பாடத்திட்ட செயலாக்கம்

பருவம் I,III,V

2022 ஜூன் - பாடங்கள் அறிமுகம்

2022 ஜூலை - அலகு -1

2022 ஆகஸ்ட் - அலகு -2 முதல் அகமதிப்பீட்டுத்தேர்வு

2022 செப்டம்பர் - அலகு 3&4 ஒப்படை இரண்டாம் அகமதிப்பீட்டுத்தேர்வு

2022 அக்டோபர் - அலகு 5 கருத்தரங்கம் - மாதிரித்தேர்வு

2022 நவம்பர் - பருவத்தேர்வுகள்

பருவம் II,IV,VI

2022 திசம்பர் - பாடங்கள் அறிமுகம் அலகு-1

2023 ஜனவரி - அலகு -2 முதல் அகமதிப்பீட்டுத்தேர்வு

2023 பிப்ரவரி - அலகு 3&4 ஒப்படை இரண்டாம் அகமதிப்பீட்டுத்தேர்வு

2023 மார்ச் - அலகு 5 கருத்தரங்கம் - மாதிரித்தேர்வு

2023 ஏப்ரல் - பருவத்தேர்வுகள்

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600039

M.Sc., Degree Programme in Chemistry
Teaching plan (ODD semester – 2022 -2023)

SEMESTER: IV
CLASS: II M.SC. CHEMISTRY
SUBJECT: **BIOINORGANIC**
SUBJECT CODE :
SUBJECT IN CHARGE: DR. T. GAYATHRI

WEEK	TOPICS TO BE COVERED
Week -1	Metal Ion deficiency and drgeages – Fe,Cu and Zn.
Week -2	Metal ion toxicity – Cu,Cd,Fe.
Week -3	Classes of metal compounds and itstoxicity – Pb,Ca and Hg& detoxification.
Week -4	Molecular mechanism of Ion transport across the membrane.
Week -5	Sodium and potassium ion pump.
Week -6	Metals in medicine – Au in Rheumatoid arthritis.
Week -7	Pt, Au and metallocene's in anti-cancer drugs.
Week -8	Metals in radio diagnosis & MRI.
Week -9	Biological cycle – Nitrogen cycle & Hydrogen Cycle.
Week -10	Metal storage and transport – Fe, Cu, Zn & V.
Week -11	Metallothioneins
Week -12	Transport of toxic metals.
Week -13	Seminar
Week -14	Class test & Assignment.
Week -15	Discussion of preview question paper.

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600039

B.Sc., Degree Programme in Chemistry
Teaching plan (EVEN semester – 2022 -23)

SEMESTER: VI

CLASS: III B.SC. CHEMISTRY

SUBJECT: ANALYTICAL CHEMISTRY

SUBJECT CODE :

SUBJECT IN CHARGE: DR. T. GAYATHRI

WEEK	TOPICS TO BE COVERED
Week -1	Separation Methods – Solvent Extraction partition co-efficient.
Week -2	Principle of differential, migration and adsorption, R _f value.
Week -3	Paper chromatography – modes of development.
Week -4	Descending, Ascending, horizontal, Detection of spots, 2D reversed phase.
Week -5	Paper chromatography, TLC, Coating material.
Week -6	Preparation of plates – solvents for development and detection.
Week -7	Column chromatography – Nature, preparation and detection.
Week -8	Titrimetric Analysis – Classification, Standard solution, 1 ⁰ & 2 ⁰ solution.
Week -9	Neutralization Indicator, Neutralization of strong acid vs st. base, weak acid vs weak base, weak base vs strong acid. Precipitation titration, redox titration self and complexometric.

Week -10	EDA, EBT and Murexide.
Week -11	Seminar.
Week -12	Indicators for aqueous and nonaqueous & solvents.
Week -13	Seminar.
Week -14	Laboratory operatorys – handling the chemical balance, safety measure.
Week - 15	Discussion of old question papers.

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600
039

M.Sc., Degree Programme in Chemistry
Teaching plan (EVEN semester – 2022 -23)

SEMESTER: III

CLASS: **M.SC. CHEMISTRY - II YEAR**

SUBJECT: **INORGANIC CHEMISTRY-III**

SUBJECT CODE :

SUBJECT IN CHARGE: DR. T. GAYATHRI

WEEK	TOPICS TO BE COVERED
Week -1	Properties of Nuclear, Nuclear force, Nuclear structure and Nuclear stability.
Week -2	LD Model, shell Model of Nuclear and Radio activity.
Week -3	Nuclear reaction its type.
Week -4	Q value, Nuclear cross section, significance and determination
Week -5	Hot action chemistry, Interaction of nuclear radiation with matter.
Week -6	Radiation Hazards and therapeutics, Detectors and their principle.
Week -7	Tracer applications of radioisotopes, Isotopic dilution and radio activation methods of analysis.
Week -8	ESR Spectroscopy – Introduction , presentation of ESR spectra.
Week -9	Lande splitting factor g and A parameters, Spin densities.

Week -10	Mc. Connel relationship, factors affecting the magnitude of g and A, zee field splitting & kramers degeneracy.
Week -11	Moesbauer Spectroscopy – Introduction, principle, instrumentation.
Week -12	Recoil energy, Doppler effects , number of MB signals.
Week -13	Isomeric shift, quadrupole splitting, hyperfine splitting
Week -14	Application to Re, Sn and Pb compounds.
Week - 15	Discussion of old question paper.

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600
039

B.Sc., Degree Programme in Chemistry
Teaching plan (ODD semester – 2022 -23)

SEMESTER: IV

CLASS: **III B.SC. CHEMISTRY**

SUBJECT: **PHARMACEUTICALCHEMISRY**

SUBJECT CODE :

SUBJECT IN CHARGE: Dr. T. GAYATHRI

WEEK	TOPICS TO BE COVERED
Week -1	Definition of the following terms Drug, pharmacophore, pharmacology.
Week -2	Pharmacopea, Bacteria and virus vaccines
Week -3	Causes, Symptoms and drugs for Anaemia, Jaundice, Cholera
Week -4	Malaria and Filaria
Week -5	Indian medicinal plants and uses- Ocimum sanctum, azadirachta indica
Week -6	Adathoda and solanum trilobatum
Week -7	Phyllanthus niruri, magnifera indica, hibiscus, rosasinenis.
Week -8	Antibacterials – Sulphadiazine, example and action
Week -9	Prontosil, Sulphathiazole & Sulphafurazole.
Week -10	Antibiotic – definition and action of penicillin
Week -11	Chloramphenicol, erythromycin and tetracycline,

Week -12	Antiseptics and disinfections definition and distinction.
Week -13	Phenolic compound , chloro compounds and cationic surfactants
Week -14	Enzymes, proteins & facts, coenzymes, prosthetic group
Week - 15	Discussion of previous question paper.

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous),
Vyasarpadi, Chennai – 600 039
B.Sc., Degree Chemistry
Teaching plan (ODD semester – 2022 -23)

Class :II Year-B.Sc.(Zoology)
Semester : III
Subject Code :19UCCHA1
Name of the Subject : **ALLIED CHEMISTRY-I**
Subject In charge : Dr P.KRISHNAMOORTHY

Week	Topics to be Covered
Week -1	Introduction of hard water and soft water Hardness of water: temporary and permanent hardness and its effect in daily life and industries
Week -2	Continuation of disadvantages of hard water - Softening of hard water explanation of various techniques.
Week -3	Continuation of softening of water by demineralization process and reverse osmosis
Week -4	Purification of water by municipal supply and for domestic use. Different steps in purification and the process of break-point chlorination.
Week -5	Introduction of Classification of organic compounds - Classification of reagents - electrophiles, nucleophiles and free radicals
Week -6	ASSESSMENT TEST-1 Continuation of Introduction of Classification of organic compounds - Classification of reagents - electrophiles, nucleophiles and free radicals
Week -7	Classification of reactions - addition, substitution, elimination, condensation and polymerisation
Week -8	Continuation of addition, substitution, elimination condensation and polymerization reactions
Week -9	Polar Effects-Inductive effect, resonance in organic compounds
Week -10	Polar effects continuation hyper-conjugation, steric effect - Keto-enol tautomerism -
Week -11	Electrophilic substitution mechanism in benzene (Nitration and Sulphonation)
Week -12	ASSESSMENT TEST-2 Preparation and uses of CH_2Cl_2 , CHCl_3 , CCl_4 , CF_2Cl_2 . BHC, DDT and Teflon -

Week -13	Continuation of Preparation and uses of CH_2Cl_2 , CHCl_3 , CCl_4 , CF_2Cl_2 . BHC, DDT and Teflon
Week -14	Preparation, properties and uses of furan, thiophene,
Week -15	Preparation, properties and uses of pyrrole, pyridine.

Signature

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous),
Vyasarpadi, Chennai – 600 039
B.Sc., Degree Chemistry
Teaching plan (ODD semester – 2022 -23)

Class :II Year-B.Sc.(Zoology)
Semester : III
Subject Code :19UCCHA1
Name of the Subject : **ALLIED CHEMISTRY-I**
Subject In charge : Dr T.K.ARUMUGAM

Week	Topics to be Covered
Week -1	Introduction about nuclear chemistry Fundamental particles Of Nucleus charges of the particle size of the nucleus, radius of the nucleus composition
Week -2	Continuation of nuclear composition explanation how to particle gives the stability to the nucleus
Week -3	Concepts of Isotopes, Isobars, Isotones and Isomers with examples
Week -4	Explanation about nuclear reactions and its Differences between chemical reactions and nuclear reactions with suitable examples
Week -5	Nuclear Fusion and Nuclear fission reaction-chain reactions- reactions in sun and stars. Comparison of nuclear fission and nuclear fusion reactions.
Week -6	ASSESSMENT TEST-1 Radio active series Th series to Np series, group displacement law Mass defect and its implications to nucleus.
Week -7	Applications of radio isotopes in carbon dating and rock dating. Its uses in medicinal field applications.
Week -8	Introduction about various types of Fuels- Classification-gaseous fuels
Week -9	Continuation of gaseous fuels water gas, producer gas, diagram with reaction and composition with CV
Week -10	Explanation about liquefied petroleum gas, gobar gas, Compressed natural gas its composition with CV.
Week -11	Fertilizers- Classification - urea, Ammonium sulphate, superphosphate, Triple super phosphate, potassium nitrate- manufacture and uses
Week -12	ASSESSMENT TEST-2 Continuation of Fertilizers-introduction to photochemistry.

Week -13	Introduction to Photochemistry - statement of Grothus - Draper Law, Stark- Einstein's Law,
Week -14	Quantum yield equation 'Hydrogen-Chlorine reaction, Photosynthesis, photosensitization definition with suitable examples.
Week -15	Explanation about phosphorescence, Fluorescence and Chemiluminiscence - Definition with examples.

Signature

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous),
Vyasarpadi, Chennai – 600 039
B.Sc., Degree Chemistry
Teaching plan (EVEN semester – 2022 -23)

Class :II Year-B.Sc.(Zoology)
Semester : IV
Subject Code :19UCCHA2
Name of the Subject : **ALLIED CHEMISTRY-II**
Subject In charge : Dr P.KRISHNAMOORTHY

Week	Topics to be Covered
Week -1	Introduction to metallurgy its Principles – basic metallurgical operations and metallurgy process
Week -2	Explanation about General methods involved in extraction of metals – concentration of ores – froth floatation, and magnetic separation
Week -3	Continuation of methods calcinations, roasting, smelting, flux, alumino-thermic process Extraction processes
Week -4	Ore separation with Chemical reduction – electrolytic reduction – metal displacement methods
Week -5	Purification or Refining of metals involves various techniques like distillation – fractional crystallization – electrolysis etc.,
Week -6	ASSESSMENT TEST-1 Purification continuation with different processes such as Zone refining – van Arkel de Boer methods and Electrolytic refining.
Week -7	Introduction to carbohydrates-Classifications preparation and reactions of glucose-open and ring structure of glucose.
Week -8	Lecture on Mutarotation. Interconversion of glucose to fructose and vice versa
Week -9	Introduction to Amino acids: Classification, preparation and properties of alanine -preparation of dipeptide using Bergman method.
Week -10	Explanation of Proteins -Classification - Denaturation and colour reactions of Proteins -
Week -11	Concepts of Nucleic acids: DNA and RNA-their components and biological functions.
Week-12	ASSESSMENT TEST-2 Introduction to electrochemistry-Conductometric titrations with acid base reactions or neutralization reactions with weak and strong acids
Week-13	Definition of pH and its determinations by colorimetric method.

Week-14	Continuation of pH solution and about Buffer salt solution – Derivation of Henderson's equation
Week-15	Explanation about Applications of buffer solution in biological process and industries – Corrosion and its prevention.

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous),
Vyasarpadi, Chennai – 600 039
B.Sc., Degree Chemistry
Teaching plan (EVEN semester – 2022 -23)

Class :II Year-B.Sc.(Zoology)
Semester : IV
Subject Code :19UCCHA2
Name of the Subject : **ALLIED CHEMISTRY-II**
Subject In charge : Dr T.K.ARUMUGAM

Week	Topics to be Covered
Week -1	Introduction to coordination complexes Definition of terms-classification of ligands and types of complexes.
Week -2	-Nomenclature IUPAC name -chelation-EDTA and its Applications
Week -3	Theories of coordination complexes Werner's Theory-Effective Atomic Number-Pauling's Theory-Postulates-
Week -4	Continuation of Paulings theory with Applications to coordination complexes. Merits and demerits of Werner and Pauling's Theory-
Week -5	The biological role of haemoglobin and chlorophyll -Applications of coordination compounds in qualitative and quantitative analysis
Week -6	Continuation of Applications of coordination compounds in qualitative and quantitative analysis like separation of copper and cadmium ions;
Week -7	Identification of metal ions like Cu, Fe and Ni-Gravimetric analysis Estimation of Nickel using DMG.
Week -8	Introduction to Qualitative and Quantitative Analysis - Principle of volumetric analysis
Week -9	Explanation about Separation techniques - extraction - distillation - crystallization
Week -10	Chromatographic separations - Principles and applications of column, chromatography.
Week -11	Continuation of Chromatographic separations - Principles and applications of paper and thin layer chromatography.
Week -12	Introduction to electrochemistry Galvanic Cells - emf

Week -13	Emf series - standard electrode potential - reference electrodes – platinum electrode and calomel electrodes its standard potential and its applications
Week -14	Electroplating process -Nickel and Chrome plating - Different type of cells - primary cell, secondary cell and fuel cells -
Week -15	Continuation of types of cells secondary cell lead acid battery and fuel cells

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous),
Vyasarpadi, Chennai – 600 039
M.Sc., Degree Chemistry
Teaching plan (ODD semester – 2022 -23)

Class : I Year-M.Sc.Chemistry
Semester : I
Subject Code : 19PACHC1
Name of the Subject : **INORGANIC CHEMISTRY-I**
Subject In charge : Dr P.KRISHNAMOORTHY

Week	Topics to be Covered
Week -1	Introduction on Chemistry of boranes, fundamental concepts and its structure and preparations
Week -2	Lecture on higher boranes, borazines , boron nitrides, structural illustrations preparation
Week -3	Continuation of boranes structural illustrations preparation and properties
Week -4	Concepts of hydroborate ions, Preparation, properties and structure.
Week -5	Lecture and concepts of STYX numbers, Wade's rules.
Week -6	ASSESSMENT TEST-1 Continuation of Wade's rule
Week -7	Carboranes- Types such as nido-closo, arachno-preparation properties and Structure.
Week -8	Continuation of carboranes preparation properties and structure
Week -9	Introduction on Metallocarboranes- Explanation on .Metal clusters for Chemistry of low molecularity metal clusters,
Week -10	Continuation of chemistry of low molecularity metal clusters Lecture on Structure of Re_2Cl_8 ; also explanation on multiple metal-metal bonds.
Week -11	Introduction on Types of inorganic polymers, comparison with organic polymers

Week -12	ASSESSMENT TEST-2 Concepts of silanes, higher silanes, multiple bonded systems, silicon nitrides, siloxanes.
Week -13	Explanation on P-N compounds, cyclophosphazenes and cyclophosphazanes. S-N compounds – S_4N_4 , $(SN)_x$.
Week -14	Lecture on Isopoly and heteropoly acids – Structure and bonding of 6- and 12 – isopoly and heteropoly anions.
Week -15	Concepts of Structure of silicates Explanation on isomorphous replacements in ortho, meta and pyro silicates – one dimensional, two dimensional and three dimensional silicates.

Signature

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous),
Vyasarpadi, Chennai – 600 039
M.Sc., Degree Chemistry
Teaching plan (ODD semester – 2022 -23)

Class : I Year-M.Sc. **Chemistry**
Semester : I
Subject Code : **19PACHC1**
Name of the Subject : **INORGANIC CHEMISTRY-I**
Subject In charge : Dr T.K.ARUMUGAM

Week	Topics to be Covered
Week -1	V.B. approach to bonding-Hitler-London, Pauling and Slater refinements, Concept of hybridization and structure of molecules, VSEPR theory shapes of molecules.
Week -2	Energy levels in homo and heteronuclear diatomic systems, Explanation about bond length, bond order and bond energy, Introduction to M.O. explaining about overlap of atomic orbitals-lecture on sigma and pi bonding in chemical bonding.
Week -3	MOT application to molecules such as BeCl ₂ , BCl ₃ and CCl ₄ , SF ₄ , etc,
Week -4	Continuation of MOT applications for hetero-atomic molecules
Week -5	Tips on the ionic character in a covalent bond introduction to Pseudo halogens, Structure and bonding in some molecules.
Week -6	ASSESSMENT TEST-1 Explanation about Structure and bonding in interhalogen compounds ClF ₃ , BrF ₃ , BrF ₅ , IF ₅ , IF ₇ etc. Lecture on Oxides and oxyacids of halogens,
Week -7	Introduction of Bonding in Noble gas compounds, structural elucidation, and explanation of Xe compounds like XeCl ₂ , XeF ₄ , XeOF ₄ , XeF ₆ .
Week -8	Introduction to Weak Chemical forces: van der Waals forces, Hydrogen bonding, basic of solid structure
Week -9	Continuation of solid structure packing and arrangements-Close packing of atoms and ions HCP and BCC types of packing voids
Week -10	Concepts of radius ratio – derivation for different packing atoms and voids
Week -11	Calculation of Lattice energy – Born-Lande equation –explanation about Kapustinski equation, Madelung constant.
Week -12	ASSESSMENT TEST-2 Introduction of structures of AB and AB ₂ types of compounds – Example rock salt, cesium chloride,
Week -13	Continuous Lecturers on structures such as Wurtzite, zinc blende, rutile, fluorite, antiferite,

Week -14	Continuation of crystal structure cadmium iodide and nickel arsenide. Difference of Structure of graphite and diamond.
Week -15	Explanation about Normal Spinels and inverse spinels and perovskite structures.

Signature

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous),
Vyasarpadi, Chennai – 600 039
M.Sc., Degree Chemistry
Teaching plan (EVEN semester – 2022 -23)

Class : I Year-M.Sc. **Chemistry**
Semester : II
Subject Code : **19PBCHC1**
Name of the Subject : **INORGANIC CHEMISTRY-II**
Subject In charge : Dr P.KRISHNAMOORTHY

Week	Topics to be Covered
Week -1	Introduction on Stability of complexes: Factors affecting the stability of complexes, Thermodynamic aspects of complex formation
Week -2	Explanation of Derivation on Stepwise and overall formation constants, concepts of chelate effect, Introduction to Determination of stability constant.
Week -3	Lecture on various methods such as Bjerrum's half method, Potentiometric method, Spectrophotometric method,
Week -4	Continuation of various methods Ion exchange method, Polorographic method and Continuous variation method (Job's method)
Week -5	Explanation on Stereoisomerism in inorganic complexes about Isomerism arising out of ligand distribution and ligand conformation,
Week -6	ASSESSMENT TEST-1 Chirality and nomenclature of chiral complexes; Lecture on the Application of ORD and CD in the identification of complexes
Week -7	Introduction to Macrocyclic ligands- Porphyrins, Corrins, Schiff's bases, crown ethers, etc.
Week -8	Introduction to General principles of catalysis; basic reactions involved in the catalysis by organometallic compounds.
Week -9	Hydrogenation of olefins (Wilkinson's catalyst)
Week -10	Continuation of Hydro formylation of olefins using Cobalt or Rhodium catalysts (OXO process)
Week -11	Lecture on oxidation of olefins to aldehydes and ketones (Wacker process) Monsanto acetic acid synthesis from methanol
Week -12	ASSESSMENT TEST-2 Continuation of Monsanto acetic acid synthesis from methanol
Week -13	Cyclooligomerisation of acetylene using Ni catalyst (Reppé's catalyst)
Week -14	Concepts of Synthetic gasoline by using ZSM-5 catalyst (Fisher-Tropsch and mobil process)
Week -15	Polymerization of olefins (Zeigler – Natta Catalyst), polymer-bound catalyst.

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous),
Vyasarpadi, Chennai – 600 039
M.Sc., Degree Chemistry
Teaching plan (EVEN semester – 2022 -23)

Class : I Year-M.Sc. Chemistry
Semester : II
Subject Code : 19PBCHC1
Name of the Subject : **INORGANIC CHEMISTRY-II**
Subject In charge : Dr T.K.ARUMUGAM

Week	Topics to be Covered
Week -1	Introduction to Crystal field theory, Splitting of d orbitals under various geometries Lecture on factors affecting splitting
Week -2	CFSE, evidences for CFSE (Structural and thermodynamic effects) about spectrochemical series, Jorgensen relation.
Week -3	Concepts of Jahn Teller distortion – Dynamic and Static J.T. effect, Jahn Teller effect and chelation,
Week -4	Lecture on Application of CFT Magnetic properties, fundamental spectral and Kinetic properties,
Week -5	Limitations of CFT, Evidences for M-L overlap. Explanation on Nephelauxetic effect,
Week -6	ASSESSMENT TEST-1 Introduction MO theory and energy level diagrams concept of Weak and strong fields complexes, Sigma and pi bonding in octahedral, square planar and tetrahedral complexes.
Week -7	Magnetic properties of complexes using MOT. Comparison of CFT and MOT of bonding in octahedral complexes.
Week -8	Introduction on Spectroscopic term symbols for d^n ions – derivation of term symbols and ground state term symbol,
Week -9	Explanation on Selection rules – relaxation of selection rules, spin orbit coupling, band intensities, weak and strong field limits – correlation diagram
Week -10	Explanation on how to predict spectra of d-configuration -Orgel diagram for weak field O_h and T_d complexes
Week -11	Splitting of energy level due to Jahn-Teller distortion. Modified Orgel diagram Lecture on Limitations of Orgel diagram
Week -12	ASSESSMENT TEST-2 Introduction to Tanabe–Sugano(T-S) diagrams
Week -13	Continuation of Tanabe–Sugano(T-S) diagrams Evaluation of Dq and B values

Week -14	Explanation of Complications in band classification between Lf (d-d) and CT bands.
Week -15	Comparison between d-d bands and CT Lanthanides and Actinides-Spectral properties.

DEGREE: M.Sc., CHEMISTRY

COURSE CODE: 19PCCHC1

COURSE NAME: Inorganic Chemistry – III

SEMESTER NO. III

STAFF NAME: Dr S Manivannan

WEEK	TOPICS TO BE COVERED
Week -1	Unimolecular charge-transfer photochemistry of cobalt (III) complexes – mechanism of CTTM, photoreduction – ligand-field photochemistry of chromium (III) complexes – Adamson's rules, photoactive excited states, V-C model – photo physics and photochemistry of ruthenium – polypyridine complexes, emission and redox properties. Photoelectron Spectroscopy
Week -2	PES - Theory, Types, origin of fine structures - shapes of vibrational fine structures – adiabatic and vertical transitions, PES of homonuclear diatomic molecules (N ₂ , O ₂) and heteronuclear diatomic molecules (CO, HCl) and polyatomic molecules (H ₂ O, CO ₂ , CH ₄ , NH ₃) – evaluation of vibrational constants of the above molecules.
Week -4	Koopman's theorem- applications and limitations.
Week -3	IR spectroscopy-Introduction, selection rules, stretching frequency of some inorganic ions.
Week -5	Effect of coordination on the stretching frequency- sulphato, carbonato, sulphito, aqua, nitro complexes
Week -6	Effect of coordination on the stretching frequency - thiocyanato, cyano, thiourea, DMSO complexes
Week -7	Raman spectroscopy –Introduction, combined applications of IR and Raman spectroscopy in the structural elucidation of N ₂ O, ClF ₃ , NO ₃ ⁻ , ClO ₄ , metal carbonyls.
Week -8	NMR spectroscopy- Introduction, structural assessment of simple inorganic compounds, applications of ¹ H, ¹⁵ N, ¹⁹ F, ³¹ P-
Week -9	NMR spectroscopy in structural problems, fluxional molecules, quadrupolar nuclei- effect in NMR spectroscopy, shift reagents- applications
Week -10	Types of organometallic compounds on the basis of the nature of M-C bond. EAN rule: 18e- and 16e- rules – determinant of oxidation state, configuration, coordination number of the metal center
Week -11	– Types and application 18e- / 16e- rules. Carbonyls – isolated concept.

	- Structure of carbonyls (simple and polynuclear)
Week -12	Nitrosyls – bridging and terminal nitrosyls, bent and linear nitrosyls. Dinitrogen compounds donors
Week -13	Alkyl and Aryl – preparation and properties; chain carbon donors – olefins, acetylene and allyl complexes – synthesis, structure and bonding; cyclic carbon donors – (metallocene) – synthesis, structure and bonding.
Week -14	Important types of reactions of organometallic compounds – substitution – electrophilic and nucleophilic attack on ligands; carbonylation and decarbonylation; oxidative addition and reductive elimination, insertion and disinsertion(elimination).
Week -15	Template synthesis of macrocyclic ligands.

DEGREE: M.Sc., CHEMISTRY
COURSE CODE: 19PACHC3
COURSE NAME: Physical Chemistry-I
SEMESTER NO. I
STAFF NAME: Dr S Manivannan

WEEK	TOPICS TO BE COVERED
Week -1	Absolute reaction rate theory
Week -2	Absolute reaction rate theory - Derivation of equations
Week -3	Thermodynamic Terms
Week -4	Significance of entropy and volume of activation
Week -5	Reactions in solution:
Week -6	factors determining reaction rates in solutions,
Week -7	Effect of dielectric constant and ionic strength
Week -8	Bronsted –Bjerrum equation
Week -9	Primary salt effect,
Week -10	Secondary salt effect,
Week -11	Influence of solvent on reaction rates
Week -12	Influence of solvent on reaction rates continues
Week -13	Acid base catalysis Definitions and conditions
Week -14	Acid base catalysis Experimental descriptions
Week -15	Bronsted relations

DEGREE: B.Sc., CHEMISTRY
COURSE CODE: 19UECHC2
COURSE NAME: Inorganic Chemistry-I
SEMESTER NO. V
STAFF NAME: Dr S Manivannan

WEEK	TOPICS TO BE COVERED
Week -1	Metal ions in biology and their vital role in the active site
Week -2	Structure and functions of Metallo proteins and enzymes. Structures and characteristic features of Hemoglobin and myoglobin
Week -3	Vitamin B ₁₂ .
Week -4	Biological functions of hemoglobin and myoglobin
Week -5	cytochromes and ferredoxins
Week -6	carbonate bicarbonate buffering system and carbonic anhydrase
Week -7	Biological nitrogen fixation,
Week -8	Photosynthesis: Photosystem-I
Week -9	Introduction - Structure and application -metal carbonyls -mono and poly nuclear carbonyls of Ni, Fe, Cr, Co and Mn -synthesis and structure
Week -10	nitrosyl compounds -classification, preparation and properties
Week -11	structure of nitrosyl chloride and sodium nitroprusside
Week -12	Nomenclature of organometallic compounds, 16- and 18- electron rule.
Week -13	Structure and bonding in transition metal carbonyls: polynuclear carbonyls, bridging and terminal carbonyls, transition metal alkyls, carbenes, and carbynes, and metallocene
Week -14	Photochemistry of organometallic compounds
Week -15	Wilkinson's catalyst and alkene hydrogenation, hydroformylation, Monsanto acetic acid process, Ziegler – Natta catalyst and polymerization of olefins.

DEGREE: M.Sc., CHEMISTRY
COURSE CODE: 19PDCHE1
COURSE NAME: Bioinorganic Chemistry
SEMESTER NO. IV
STAFF NAME: Dr S Manivannan

WEEK	TOPICS TO BE COVERED
Week -1	Inorganic elements in biological systems, Basic Bioenergetics and classification of enzymes.
Week -2	Active transport of cations across membranes, Sodium pump.
Week -3	Biology of calcium carriers and the role in muscle contraction.
Week -4	Enzyme stabilization, clotting of blood and biological calcification.
Week -5	Porphyrin ring system – metalloporphyrins
Week -6	hemoglobin and myoglobin – structures and work functions
Week -7	synthetic oxygen carriers – cytochromes – structure and work functions in respiration
Week -8	chlorophyll – structure – photosynthetic sequence
Week -9	Iron-sulphur proteins (non-heme iron protein).
Week -10	Metal storage and transport: Fe,Cu,Zn and V storage and transport
Week -11	Metallothionein: transporting some toxic metals
Week -12	Zn ²⁺ ion complexes: carbonic anhydrase
Week -13	carboxypeptidase A,
Week -14	Carboxypeptidase G2
Week -15	Cobalt for Zn ion substitution

DEGREE: M.Sc., CHEMISTRY
COURSE CODE: 19PBCHC3
COURSE NAME: Physical Chemistry -II
SEMESTER NO. II
STAFF NAME: Dr S Manivannan

WEEK	TOPICS TO BE COVERED
Week -1	Micro wave spectroscopy - Introductions
Week -2	Micro wave spectroscopy- Theory
Week -3	Micro wave spectroscopy- Principles
Week -4	selection rules
Week -5	Instrumentation
Week -6	Energy levels in atoms and molecules
Week -7	Calculations of energy levels in atoms and molecules
Week -8	Stark Effect and its applications
Week -9	Fourier transformation
Week -10	Rotational spectra of diatomic molecules
Week -11	Rotational spectra of polyatomic molecules
Week -12	P, Q, R branches
Week -13	effect of isotopic substitution
Week -14	Non-rigid rotator- Linear molecules
Week -15	Theory of Rotational Raman spectra.

DEGREE: B.Sc., CHEMISTRY
COURSE CODE: 19UFCHE1
COURSE NAME: Analytical Chemistry
SEMESTER NO. VI
STAFF NAME: Dr S Manivannan

WEEK	TOPICS TO BE COVERED
Week -1	Role of Analytical Chemistry. Classification of analytical methods – classical and instrumental.
Week -2	Types of instrumental analysis. Selecting an analytical method - Neatness and cleanliness
Week -3	Laboratory operations and practical - Analytical balance - Techniques of weighing, errors. Volumetric glassware-cleaning and calibration of glassware.
Week -4	Sample preparations – dissolution and decompositions. Gravimetric techniques. Selecting and handling of reagents. Laboratory notebooks. Safety in the analytical laboratory.
Week -5	Definition of terms mean and median. Precision-standard deviation, relative standard deviation.
Week -6	Accuracy-absolute error, relative error. Types of errors in experimental data-determinate (systematic), indeterminate (or random) and gross.
Week -7	Sources of errors and the effects upon the analytical results.
Week -8	Methods for reporting analytical data. Statistical evaluation of data-indeterminate errors. The uses of statistics.
Week -9	Principles of gravimetric analysis – characteristics of precipitating agents
Week -10	choice of precipitants and conditions of precipitation – use of sequestering agents
Week -11	specific and selective precipitants – DMG, cupferron, salicylaldehyde, ethylene diamine
Week -12	co precipitation – post precipitation – peptization
Week -13	differences reduction of error – precipitation from homogeneous solutions

Week -14	calculations in gravimetric methods – use of gravimetric factor.
Week -15	Thermal analytical methods – Principle involved in thermogravimetric analysis and differential thermal analysis.

DEPARTMENT OF CHEMISTRY

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

**B.Sc., Degree Programme in Chemistry
Teaching plan (ODD semester – 2022 -23)**

Class : B.Sc. **Chemistry**- I year

Semester: I

Subject Code :

Name of the Subject: **GENERAL CHEMISTRY-I**

Subject In charge: Mrs .REVATHY SELVARAJ

Week	Topics to be Covered
Week -1	Principles of Planck's theory, Black body radiation, photoelectric effect and Compton effect
Week -2	Fundamental particles of matter. Bohr's model of hydrogen atom,
Week -3	postulates of Bohr's atomic structure
Week -4	Wave particle duality of particle, de-Broglie theory and equation
Week -5	Heisenberg uncertainty principle
Week -6	physical concepts of uncertainty principle
Week -7	Schrodinger's time independent wave equation
Week -8	Significance of the Schrodinger wave equation
Week -9	Eigen values and Eigen functions, concepts of orbitals
Week -10	Wave functions and its physical properties
Week -11	Postulates of Quantum mechanics
Week -12	Significance of Ψ and Ψ^2
Week -13	concept of orbitals and shape of orbitals
Week -14	Normalization and Orthogonal function and its significances
Week -15	Radial and angular distribution functions

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600039

M.Sc., Degree Programme in Chemistry
Teaching plan (ODD semester – 2022 -2023)

SEMESTER: IV
CLASS: II M.SC. CHEMISTRY
SUBJECT: **BIOINORGANIC**
SUBJECT CODE :
SUBJECT IN CHARGE: DR. T. GAYATHRI

WEEK	TOPICS TO BE COVERED
Week -1	Metal Ion deficiency and drgeages – Fe,Cu and Zn.
Week -2	Metal ion toxicity – Cu,Cd,Fe.
Week -3	Classes of metal compounds and itstoxicity – Pb,Ca and Hg& detoxification.
Week -4	Molecular mechanism of Ion transport across the membrane.
Week -5	Sodium and potassium ion pump.
Week -6	Metals in medicine – Au in Rheumatoid arthritis.
Week -7	Pt, Au and metallocene's in anti-cancer drugs.
Week -8	Metals in radio diagnosis & MRI.
Week -9	Biological cycle – Nitrogen cycle & Hydrogen Cycle.
Week -10	Metal storage and transport – Fe, Cu, Zn & V.
Week -11	Metallothioneins
Week -12	Transport of toxic metals.
Week -13	Seminar
Week -14	Class test & Assignment.
Week -15	Discussion of preview question paper.

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in Chemistry
Teaching plan (ODD semester – 2022 -223)

Class : B.Sc. **Chemistry**- III year

Semester : V

Subject Code

Name of the Subject: **PHYSICAL CHEMISTRY-I**

Subject In charge: Mrs .REVATHY SELVARAJ

Week	Topics to be Covered
Week -1	Chemistry of Symmetry elements, symmetry operations
Week -2	Concept of point groups, various point groups with suitable examples
Week -3	Point groups identification and determination, group multiplication table of C _{2v} point groups
Week -4	Group multiplication table of C _{3v} point groups
Week -5	Matrix representation of symmetry operations.
Week -6	Principles of spectroscopy, Regions of electromagnetic spectrum
Week -7	Properties of electromagnetic radiation, concept of frequency, wavelength, wave number, energy, energy levels,
Week -8	Interaction of electromagnetic radiation with matter.
Week -9	Basic principles of atomic and molecular spectroscopy
Week -10	Statement of Born-Oppenheimer approximation
Week -11	Diatomic molecules - Energy levels of a rigid rotor, selection rules, spectral intensity.
Week -12	Distribution using population distribution
Week -13	determination of bond length -qualitative description of non-rigid rotor - isotope effect.
Week -14	Maxwell-Boltzmann distribution.

DEPARTMENT OF CHEMISTRY

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

**B.Sc., Degree Programme in Chemistry
Teaching plan (ODD semester – 2022 -23)**

Class : **B.Sc MATHS**

Semester : I

Subject Code :

Name of the Subject: **ALLIED CHEMISTRY-I**

Subject In charge: Mrs .REVATHY SELVARAJ

Week	Topics to be Covered
Week -1	Introduction to organic compounds, nomenclature of organic compounds
Week -2	Classification of organic compounds - Classification of reagents - electrophiles, nucleophiles and free radicals
Week -3	Classification of reactions - addition, substitution, elimination, condensation and polymerization.
Week -4	- Polar Effects-Inductive effect, resonance
Week -5	., hyper-conjugation, steric effect - Keto-enol tautomerism -
Week -6	electrophilic substitution mechanism in benzene Nitration and Sulphonation.
Week -7	chemistry of some useful organic compounds Preparation and uses of CH_2Cl_2 , CHCl_3 ,
Week -8	Preparation and uses of CCl_4 , CF_2Cl_2 .
Week -9	Preparation and uses of BHC, DDT and Teflon -
Week -10	Heterocyclic compounds - Preparation, properties and uses of furan, thiophene
Week -11	, Heterocyclic compounds - Preparation, properties and uses of pyrrole, pyridine.

Week -12	Fuels- Classification-gaseous fuels like water gas, producer gas, liquefied petroleum gas, gobar gas, Compressed natural gas
Week -13	Fertilizers- Classification - urea, Ammonium sulphate, superphosphate, Triple super phosphate, potassium nitrate-manufacture and uses
Week -14	- Hardness of water: temporary and permanent hardness, disadvantages of hard water
Week -15	Softening of hard water - demineralization process and reverse osmosis - Purification of water for domestic use.

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai –39
B.Sc., Degree Programme in Chemistry
Teaching plan (EVEN semester 2022 -23)

Class : MSc. Chemistry- I year
Semester: II
Subject Code :
Name of the Subject: **PHYSICAL CHEMISTRY-II**
Subject In charge: Mrs .REVATHY SELVARAJ

Week	Topics to be Covered
Week -1	Introduction, Principles, and theory of Polarography
Week -2	instrumentation of Polarography
Week -3	Applications of Polarography
Week -4	Introduction, Principles, and theory of amperometry
Week -5	instrumentation of amperometry
Week -6	Applications of amperometry
Week -7	Introduction, Principles, and theory of coulometry
Week -8	Instrumentation and Applications of coulometry
Week -9	Introduction, Principles, and theory of EDAX
Week -10	Instrumentation and Applications of EDAX .Interpretation of spectra-Merits and demerits.
Week -11	Introduction, Principles, and theory of XPS
Week -12	Instrumentation and Applications of XPS .Interpretation of spectra-Merits and demerits.
Week -13	Introduction, Principles, and theory of AAS,
Week -14	Instrumentation and Applications of AAS.I interpretation of spectra-Merits and demerits.
Week -15	Introduction, Principles, and theory Instrumentation and Applications of AES Interpretation of spectra-Merits and demerits.

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous),
Vyasarpadi, Chennai – 600 039
B.Sc., Degree Chemistry
Teaching plan (ODD semester – 2022 -23)

Class : III Year-B.Sc. Chemistry
Semester : V
Subject Code : 19UECHC2
Name of the Subject : INORGANIC CHEMISTRY-I
Subject In charge : Dr P.KRISHNAMOORTHY

Week	Topics to be Covered
Week -1	Introduction of transition elements – electronic configuration – group study of titanium, vanadium, chromium, manganese and iron metals – comparative study of zinc group metals
Week -2	Explanation of Important uses of transition metals and their alloys. Horizontal comparison with Fe, Co, Ni groups – toxicity of Cd and Hg; Lecturer on oxides, mixed oxides, halides, and oxohalides of transition metals.
Week -3	Synthesis and reactivity of vanadates, chromates, dichromate, molybdates, tungstates, tungsten bronzes, manganate, permanganate – polycations.
Week -4	Explanation about Interstitial compounds – nitrides, carbides, hydrides, borides of Ti, V, Cr, W and their industrial uses.
Week -5	Concepts of General characteristics of f-block elements lanthanide series separation by ion exchange and solvent extraction methods Explanation about lanthanide contraction
Week -6	ASSESSMENT TEST-1 Lecturer on actinide series – separation of actinides – oxidation states and general properties – Uranium – occurrence and metallurgy –
Week -7	Uranium Continuation chemical properties of oxides, hydrides and halides. Introduction to metal carbonyls.
Week -8	Continuation lecture on Introduction of Structure and application - metal carbonyls
Week -9	Different types of mono and poly nuclear carbonyls of Ni, Fe, Cr, Co and Mn
Week -10	Lecture on synthesis and explanation of nitrosyl compounds and its properties
Week -11	Explanation of classification, preparation and properties -structure of nitrosyl chloride and sodium nitro-prusside.
Week -12	ASSESSMENT TEST-2 Introduction to Nomenclature of organometallic compounds, 16- and 18- electron rule. Structure and bonding in transition metal carbonyls

Week -13	Continuation of Structure and bonding in transition metal carbonyls polynuclear carbonyls, bridging and terminal carbonyls
Week -14	:polynuclear carbonyls, bridging and terminal carbonyls, transition metal alkyls, carbenes, and carbynes, and metallocenes, Photochemistry of organometallic compounds -Wilkinson's catalyst
Week -15	Lecture on alkene hydrogenation, hydroformylation, Monsanto acetic acid process, Ziegler – Natta catalyst and polymerization of olefins.

DEPARTMENT OF CHEMISTRY

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

B.Sc., Degree Programme in Chemistry
Teaching plan (EVEN semester – 2022 -23)

Class : B.Sc. Chemistry- I year Semester: II

Subject Code :

Name of the Subject GENERAL CHEMISTRY 11

Subject In charge: Dr .L.LAKSHMI

Week	Topics to be Covered
Week -1	UNIT – I: Aliphatic Compounds Alkanes - preparations, physical properties, reactions, reactions with radical mechanism for substitution reaction - cracking
Week -2	Alkenes: Preparation from alcohol, haloalkane, dihaloalkanes and alkynes - reactions of alkenes -
Week -3	mechanisms involved in addition of hydrogen, halogen, hydrogen halide, hypohalous acid, water, hydroboration, hydroxylation, ozonolysis and epoxidation -
Week -4	peroxide effect - allylic substitution, oxidation by KMnO_4 and polymerization - Application in the synthesis of following molecules
Week -5	Dibenzyl (from toluene), cis and trans 2-butene, propanal and 1-methyl cyclohexanol.
Week -6	WRITTEN TEST AND ORAL TEST REVISION ON ALKANES AND ALKENS
Week -7	Alkynes: preparation, reactions - addition of hydrogen, halogen, hydrogen halide, water, HCN , CH_3COOH , hydroboration - dimerisation and cyclisation - acidity of terminal alkynes.
Week -8	UNIT – II: Alicyclic Compounds Cycloalkanes: Preparation (small, medium & large ring compounds) - reactions - cycloaddition,
Week -9	dehalogenation, pyrolysis of calcium salt of dicarboxylic acid - Wurtz
Week -10	- Baeyer's strain theory. Cycloalkenes: Preparation and reactions of cycloalkenes - Preparation of conjugate theory. Cycloalkenes:

Week -11	Preparation of conjugate dienes - reactions - 1,2 and 1,4 addition, polymerization and Diels-
Week -12	Diels-Alder reaction - Application in the synthesis of following molecules - trans 2-chlorocyclopentanol,
Week -13	trans-2 methylcyclopentanol, cis and trans 1,2 cyclohexanediol, cyclohexene,
Week -14	2,3-butanedione and adipic acid. Reactions. REVISION ON CYCLOALKANES
Week -15	. DISCUSS PREVIOUS YEARS QUESTION PAPERS . REVISION

DEPARTMENT OF CHEMISTRY

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

M.Sc., Degree Programme in Chemistry
Teaching plan (Even semester – 2022 -23)

Class : M.Sc. Chemistry- I year Semester: II

Subject Code :

Name of the Subject ORGANIC CHEMISTRY - II

Subject In charge: Dr .L.LAKSHMI

Week	Topics to be Covered
Week -1	UNIT III- ELIMINATION REACTION , E1, E2,E1CB
Week -2	Ei ELIMINATION. CONFORMATION OF MECHANISM.SOLVENT , SUBSTRATE LEAVING GROUP EFFECTS
Week -3	SAYTZEFFS RULE Vs HOFFMAN ELIMINATION.
Week -4	STEREOCHEMISTRY OF E2 ELIMINATION.ELIMINATION IN CYCLOHEXANE.RING SYSTEM
Week -5	MECHANISM OF PYROLYTIC ELIMINATION CHUGAEV REACTION.COPE ELIMINATION.
Week -6	HOFFMAN DEGRADATION.. PYROLYSIS OF ESTER
Week -7	REVISION IN ELIMINATION. TEST
Week -8	UNIT-IV. MOLECULAR REARRANGEMENTS. NAME REACTIONS . INTRODUCTION . BASIC REARRANGEMENTS . INTRODUCTION OF FEW SIMPLE NAMEINGREACTIONS
Week -9	STUDY OF MECHANISM S OF FOLLOWING NAME
Week -10	BECKMANN REARRANGEMENTS.CURTIUS .HOFFMAN
Week -11	SCHMIDT. LOSSEN REARRANGEMENTS
Week -12	WOLF , PINACOLE AND PINACOLANE REARRANGEMENTS

Week -13	WAGNER MEERWIN REARRANGEMENTS.DAMJANOV REARRANGEMENTS.PUMMERER AND VON-RICHTER REARRANGEMENTS.
Week -14	PHENOL. FAVORSKI, BENZIDINE REARRANGEMENTS
Week -15	CLAISEN COPE SOMMLET- HAUSER. REARRANGEMENTS . REVISION ON REARRANGEMENTS AND ITS MECHANISM

DEPARTMENT OF CHEMISTRY

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

M.Sc., Degree Programme in Chemistry
Teaching plan (EVEN semester – 2022 -23)

Class : M.Sc. Chemistry- II-year Semester: IV

Subject Code : 19PDSBE4

Name of the Subject: **PERSONALITY DEVELOPMENT**

Subject In charge: Dr .L.LAKSHMI

Week	Topics to be Covered
Week -1	PERSONALITY DEVELOPMENT.DEFINITION .PERSONALITY DETERMINATION.HEREDITY. ENVIRONMENTAL SITUATION. SELF AWARENESS .BENEFITS OF SELF
Week -2	ENHANCING SELF AWARENESS. SELF ANALYSIS. BEHAVIOUR . MOTIVATION-PRACTICE
Week -3	MODES OF THINKING. MODES OF ACTING. MODES OF INTERACTING-TEST
Week -4	ASK FOR FEEDBACK . SEMINAR . PRACTICE
Week -5	STEPS TO DO SELF ANALYSIS. THE ELEMENTS OF SELF MOTIVATION CONVERGENT THINKING. LATERAL THINKING
Week -6	THE BIG FIVE MODEL. EXTROVERSION. AGREEABLANESS. EMOTIONAL STABILITY. CONSCIENTIOUSNESS.
Week -7	OPENESS TO EXPERIENCE. SELF MONITORING-PRACTICE
Week -8	EMOTIONAL STABILITY. TRAITS FOR BUILDING POSITIVE PERSONALITY . CHIEF TRAITS FOR BUILDING PERSONALITY .
Week -9	CONSCIOUS PROGRAMMING. SUBCONSCIOUS
Week -10	PERSONAL GROOMING. ENHANCING BEAUTY , HEALTH AND HYGIENE.

Week -11	TEST. SEMINAR PRACTICE
Week -12	SEMINAR PRACTICE
Week -13	MEN DRESS . SHIRTS TROUSERS. TIES. SOCKS. SHOES. BELTS
Week -14	WATCHES .HAIRSTYLES. WOMEN DRESS . SHOES HAIR CLINIC. SANDAL. BAGS. ACCESSORIES
Week -15	BENEFITS OF SELF AWARENESS. SELF MONITORING . PROGRAMMING. . DISCUSS PREVIOUS YEARS QUESTION PAPERS . REVISION

DEPARTMENT OF CHEMISTRY

Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai – 600 039

DEPARTMENT OF CHEMISTRY

Teaching plan (EVEN semester – 2022 -23)

Class :B.Sc.PHYSICS- I year Semester: IV

Subject Code :

Name of the Subject: ALLIED CHEMISTRY - I I

Subject In charge: Dr .L.LAKSHMI

Week	TOPICS TO BE COVERED
Week -1	Unit II Metallurgy Occurrence of metals – Principles of metallurgy – basic metallurgical operations and metallurgy process
Week -2	General methods involved in extraction of metals –concentration of ores – froth floatation,
Week -3	magnetic separation, calcinations, roasting, smelting, flux
Week -4	aluminothermic process Extraction processes – Chemical reduction – electrolytic reduction – metal displacement
Week -5	Refining methods – distillation – fractional crystallization
Week -6	electrolysis Zone refining – van Arkel de Boer methods – Electrolytic refining. REVISION ON METALLURGY
Week -7	Unit III Biomolecules Introduction of bio molecules
Week -8	Classifications, preparation and reactions of glucose-open and ring structure of glucose.
Week -9	Mutarotation. Interconversion of glucose to fructose and vice versa
Week -10	Amino acids: Classification, preparation and properties of alanine
Week -11	-preparation of dipeptide using Bergman method. Proteins -Classification -
Week -12	Denaturation and colour reactions of Proteins -
Week -13	Nucleic acids: DNA and RNA-their components and biological functions. REVISION ON PROTEINS AND NUCLIC ACIDS AND CARBOHYDRATES

Week -14	UNIT IV (REMAINING PORTION) Conductometric titrations - Definition of pH and its determinations by colorimetric method. Buffer solution – Henderson's equation -
Week -15	Applications of buffer solution in biological process and industries – Corrosion and its prevention. . DISCUSS PREVIOUS YEARS QUESTION PAPERS . REVISION

Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Chemistry
Teaching plan (EVEN semester – 2022 -23)

Class : B.Sc. **Plant Biology and Biotechnology-II** year

Semester: IV

Subject Code :

Name of the Subject: **ALLIED CHEMISTRY - II**

Subject In charge: Dr S. VIDYA

Week	Topics to be Covered
Week -1	Classification, preparation and reactions of glucose.
Week -2	open and ring structure of glucose- Mutarotation. Interconversion of glucose to fructose and vice versa
Week -3	Amino acids: Classification, preparation and properties of alanine
Week -4	preparation of dipeptide using Bergman method. Proteins – Classification
Week -5	Denaturation and colour reactions of Proteins - Nucleic acids: DNA and RNA-their components and biological functions.
Week -6	TEST-I, Definition of terms-classification of ligands-Nomenclature
Week -7	EDTA and its Applications –Werner's Theory-Effective Atomic Number
Week -8	Pauling's Theory-Postulates-Applications to $(\text{Ni}(\text{CO})_4)$, $(\text{Ni}(\text{CN})_4)^{2-}$, $(\text{Co}(\text{CN})_6)^{3-}$
Week -9	Merits and demerits of Werner and Pauling's Theory-Biological role of transition metal ions
Week -10	Applications of coordination compounds in qualitative and quantitative analysis like separation of copper and cadmium ions
Week -11	Nickel and cobalt ions; identification of metal ions like Cu, Fe and Ni- Estimation of Nickel using DMG.
Week -12	TEST –II, Introduction to Qualitative and Quantitative Analysis
Week -13	Principle of volumetric analysis -Separation techniques - extraction -
Week -14	Chromatographic separations - Principles and applications of column
Week -15	Paper and thin layer chromatography.

DEPARTMENT OF CHEMISTRY**Dr. Ambedkar Government Arts College, (Autonomous)****Vyasarpadi, Chennai – 600 039****M.Sc., Degree Programme in Chemistry****Teaching plan (EVEN semester – 2022 -23)**

Class : M.Sc Chemistry – II year

Semester: IV

Subject Code : **22PDCHC3**Name of the Subject: **PHYSICAL CHEMISTRY - IV**

Subject In charge: Dr S. VIDYA

Week	Topics to be Covered
Week -1	Partition functions-Translational
Week -2	Rotational, Vibrational
Week -3	Electronic partition function
Week -4	Calculation of thermodynamic parameters
Week -5	Calculation of thermodynamic parameters
Week -6	TEST – I ,Equilibrium constants in terms of partition function
Week -7	Debye heat capacity of solids.
Week -8	Einstein heat capacity of solids.
Week -9	Phenomenological equations-Onsager reciprocity relations
Week -10	Coupled reactions.The principal of microscopic reversibility
Week -11	Onsager reciprocal relations – verification
Week -12	Entropy production- rate of entropy production
Week -13	entropy production in chemical reactions
Week -14	TEST –II, SEMINAR
Week -15	SEMINAR

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous)
Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Chemistry
Teaching plan (EVEN semester – 2022--23)

Class : M.Sc Chemistry – I year

Semester: II

Subject Code : **22PBCHC3**

Name of the Subject: **PHYSICAL CHEMISTRY - II**

Subject In charge: Dr S. VIDYA

Week	Topics to be Covered
Week -1	Black body radiation-Planck's quantum theory-Wave particle duality
Week -2	Uncertainty Principle. Operators-linear, commutation
Week -3	Hermitian and Hamiltonian operators. Eigen functions and Eigen values
Week -4	Postulates of quantum mechanics
Week -5	Derivation of Schrodinger's time-independent wave equation and its application to particle in a one dimensional box
Week -6	TEST – I, particle in a three dimensional box, harmonic oscillator
Week -7	Rigid rotor
Week -8	Hydrogen atom
Week -9	Born-Oppenheimer approximation-Hydrogen molecule ion LCAO-MO
Week -10	VB treatment of the hydrogen molecule
Week -11	Antisymmetry and Pauli's exclusion principle. Slater detrimental wave function
Week -12	TEST –II, Term symbols and spectroscopic states-Russell Saunders
Week -13	The variation theorem and Perturbation theory.Applications of variation method and perturbation theory to the helium atom
Week -14	Hybridization-determination of bond angles of sp, sp ² and sp ³ hybridizations.Huckel pi electron (HMO) theory
Week -15	Its applications to ethylene, butadiene and benzene. A brief idea of Hartree and Hartree-Fockself consistent field theory

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous)
Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Chemistry
Teaching plan (EVEN semester – 2022 -23)

Class : B.Sc. N&D I YEAR

Semester: IV

Subject Code :

Name of the Subject: **ALLIED CHEMISTRY - II**

Subject In charge: **Dr. S. ANANDHI**

Week	Topics to be Covered
Week -1	Classification, preparation and reactions of glucose.
Week -2	open and ring structure of glucose- Mutarotation. Interconversion of glucose to fructose and vice versa
Week -3	Amino acids: Classification, preparation and properties of alanine
Week -4	preparation of dipeptide using Bergman method. Proteins – Classification
Week -5	Denaturation and colour reactions of Proteins - Nucleic acids: DNA and RNA-their components and biological functions.
Week -6	TEST-I, Definition of terms-classification of ligands-Nomenclature
Week -7	EDTA and its Applications –Werner's Theory-Effective Atomic Number
Week -8	Pauling's Theory-Postulates-Applications to $(\text{Ni}(\text{CO})_4)$, $(\text{Ni}(\text{CN})_4)^{2-}$, $(\text{Co}(\text{CN})_6)^{3-}$
Week -9	Merits and demerits of Werner and Pauling's Theory-Biological role of haemoglobin and chlorophyll
Week -10	Applications of coordination compounds in qualitative and quantitative analysis like separation of copper and cadmium ions
Week -11	Nickel and cobalt ions; identification of metal ions like Cu, Fe and Ni- Estimation of Nickel using DMG.
Week -12	TEST –II, Introduction to Qualitative and Quantitative Analysis
Week -13	Principle of volumetric analysis -Separation techniques - extraction -
Week -14	Chromatographic separations - Principles and applications of column
Week -15	Paper and thin layer chromatography.

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous)
Vyasarpadi, Chennai – 600 039
B.Sc., Degree Programme in Chemistry
Teaching plan (EVEN semester – 2022 -23)

Class : B.Sc Chemistry – III year

Semester: VI

Subject Code :

Name of the Subject: **ORGANIC CHEMISTRY - VI**

Subject In charge: **Dr. S. ANANDHI**

Week	Topics to be Covered
Week -1	UV and Visible Spectroscopy: Possible electronic transitions in an organic compound. Selection rule. Solvent effect. Chromophore and auxochromes.
Week -2	Various types of shifts in λ max and in ϵ max. Calculation of λ max of an organic compound.
Week -3	Applications of UV and Visible spectroscopy in organic Chemistry.
Week -4	Infrared spectroscopy: Various types of vibrations and number of vibrational degrees of freedom
Week -5	Selection Rules-Solvent effect. Effect of Hydrogen bond - Finger print region.
Week -6	The characteristic ranges of absorption of IR radiation of various functional groups.
Week -7	Spin Resonance Spectroscopy: NMR active nuclei. Equivalent and non-equivalent protons and number of signals.
Week -8	Reference compound TMS. Relative signal intensities and number of hydrogens. Chemical shift and various factors influencing chemical shift. Spin-spin splitting, splitting constant, NMR spectrum of simple molecules.
Week -9	Mass Spectrometry: Basic principles - instrumentation - Representation of mass spectrum. Molecular ion - identification of parent ion - isotopic peaks - Determination of molecular formula - meta stable peak
Week -10	General fragmentation – McLafferty rearrangement - Retro-Diels-Alder rearrangement. Mass spectra of ethylbenzene, methoxyethane, acetophenone, n-butyl amine, 1- propanal and 1-pentanol.
Week -11	Dyes - theory of color and constitution - chromophore, auxochrome, classification according to application and structure - preparation and uses of azo dyes - methyl orange
Week -12	triphenyl methane dyes - malachite green, indigo dyes - Indigotin, anthraquinone dyes - alizarin, phthalein dyes –fluorescein. Polymers- definition- classification -mechanism of cationic, anionic and free radical polymerisation

Week -13	preparation of Nylon 66, Nylon 6, Dacron, Bakelite, melamine, neoprene, Buna-N, Buna-S and biodegradable polymers
Week -14	molecular weight of polymers (elementary treatment). Green Chemistry - Definition, need and basic principles of green chemistry ,green synthesis - Aqueous phase reactions, reactions in ionic liquids
Week -15	, Solid supported synthesis, Solvent free reactions (solid phase reactions), - Green catalysts - Phase transfer catalysts (PTC) and Biocatalysts. Microwave and Ultrasound assisted green synthesis- green chemical synthesis of Paracetamol.

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous)
Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Chemistry
Teaching plan (EVEN semester – 2022 -23)

Class : M.Sc Chemistry – I year

Semester: II

Subject Code :

Name of the Subject: **ORGANIC CHEMISTRY - II**

Subject In charge: **Dr. S. ANANDHI**

Week	Topics to be Covered
Week -1	Electrophilic addition to carbon–carbon double and triple bonds. Nucleophilic addition to carbon–carbon multiple bonds.
Week -2	Generation and addition of carbenes-Michael addition and Robinson annulation.
Week -3	Hydroxylation of olefinic double bonds (OsO ₄ , KMnO ₄); Woodward and Prevost oxidation.
Week -4	Epoxidation using peracids including Sharpless epoxidation, Ozonolysis.
Week -5	TEST – I Hydrogenation (homogenous and heterogeneous) and Transfer hydrogenation. Hydration of carbon-carbon double and triple bonds.
Week -6	Nucleophilic addition to –C=O bond. A study of Mannich, benzoin, Darzen's glycidic ester, Stobbe and Knoevenagel
Week -7	condensation reactions; Wittig, Wittig-Horner olefination reactions;
Week -8	Sulfur and Sulfonium ylides and their reactions, Julia olefination & Peterson alkene synthesis.
Week -9	reduction of carbonyl functions (Corey's procedure).
Week -10	Oxidation with Cr (including PCC, PDC, Jones) and Mn (including MnO ₂ and BaMnO ₄) reagents
Week -11	Oxidation with LTA, DDQ and SeO ₂ ; Oxidation using DMSO either with DCC or Ac ₂ O or Oxaloyl chloride;
Week -12	TEST – II Oxidation using IBX and Dess-Martin Periodinane (DMP)
Week -13	Reduction with NaBH ₄ , NaCNBH ₃ , Zn(BH ₄) ₂ LiAlH ₄ , Li(^t BuO) ₃ AlH, DIBAL-H, Red-Al, Et ₃ SiH and Bu ₃ SnH; Reduction using selectrides; Birch reduction.
Week -14	Li(^t BuO) ₃ AlH, DIBAL-H, Red-Al, Et ₃ SiH and Bu ₃ SnH;
Week -15	Reduction using selectrides; Birch reduction.

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous)
Vyasarpadi, Chennai – 600 039
M.Sc., Degree Programme in Chemistry
Teaching plan (EVEN semester – 2022 -23)

Class : M.Sc Chemistry – I year
Semester: II
Subject Code : **22PBCHE2B**
Name of the Subject: **POLYMER CHEMISTRY**
Subject In charge: **Dr. S. ANANDHI**

Week	Topics to be Covered
Week -1	An introduction to polymers and macromolecules. Natural and synthetic polymers.
Week -2	Classification of polymers-addition and condensation polymers.
Week -3	Coordination polymerization- mechanism of free radical, cationic and anionic polymerization reactions.
Week -4	Linear, branched and crosslinked polymers, Stereochemistry of polymers-isotactic, syndiotactic and atactic.
Week -5	The crystalline melting point, the glassy state and glass transition temperature. Solubility of polymers.
Week -6	TEST -1 Polymer degradation-Thermal, mechanical, High energy radiation, oxidative and hydrolytic.
Week -7	Number average molecular weight and weight average molecular weight. Viscosity and molecular weight, light scattering and gel permeation chromatography.
Week -8	Polythene, PTFE, Freons, PVC, PVA, chlorosulphonated polyethylene, polypropylene and polystyrene.
Week -9	Constitution of natural rubber, butyl, buna, buna-S, buna-N, Neoprene, SBR, Thiocol, Polyurethane and silicone rubbers
Week -10	compounding of rubber, reclaimed rubber spongy rubber, foam rubber and thermocole polymers.
Week -11	Chlorinated rubber, oxidized rubber, cyclized rubber and ebonite. rubber, foam rubber and thermocole polymers. Chlorinated rubber, oxidized rubber, cyclized rubber and ebonite.
Week -12	TEST II , Constitution of natural rubber, butyl, buna, buna-S, buna-N,
Week -13	Polythene, PTFE, Freons, PVC, PVA, chlorosulphonated polyethylene, polypropylene and polystyrene.
Week -14	Constitution of natural rubber, butyl, buna, buna-S, buna-N, Neoprene,

	SBR, Thiocol,
Week -15	Neoprene, SBR, Thiocol, Polyurethane and silicone rubbers, compounding of rubber, reclaimed rubber spongy

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai –
600039

M.Sc., Degree Programme in Chemistry
Teaching plan (ODD semester – 2022 -2023)

SEMESTER: III

CLASS: II **M.SC. CHEMISTRY**

SUBJECT: MATERIAL CHEMISTRY

SUBJECT CODE : 22PCCHE3A

SUBJECT IN CHARGE: DR.C.SRINIVASAN

WEEK	TOPICS TO BE COVERED
Week -1	Preparation of nano materials- Introduction
Week -2	CVD and Electrodeposition methods .
Week -3	Sol-gel synthesis and Ball milling method
Week -4	Uses of natural nanoparticles.Discussion
Week -5	Synthesis and applications of carbon nanotubes.
Week -6	Applications of nano sensors-Introduction.
Week -7	Electrochemical and biosensors
Week -8	Characterisation of nano materials-Introduction
Week -9	Explanation of techniques like SEM,TEM,STEM.
Week -10	AFM technique and particle size analysis
Week -11	Introduction about polymers
Week -12	Methods to determine molar mass of polymers
Week -13	Principles of polymerisation reactions
Week -14	Mechanism of polymerisation reactions
Week -15	Discussion of previous year question papers

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai –
600039

M.Sc., Degree Programme in Chemistry
Teaching plan (ODD semester – 2022 -2023)

SEMESTER: III
CLASS: II **M.SC. CHEMISTRY**
SUBJECT: PHYSICAL CHEMISTRY
SUBJECT CODE : 22PCCHC3
SUBJECT IN CHARGE: DR.C.SRINIVASAN

WEEK	TOPICS TO BE COVERED
Week -1	Symmetry elements and symmetry operations
Week -2	Abelian group and point groups
Week -3	Determination of point groups
Week -4	Group multiplication table
Week -5	Matrix representations of symmetry operations
Week -6	Similarity transformations
Week -7	Reducible and irreducible representations
Week -8	Reduction formula and direct product representation
Week -9	Great Orthogonality Theorem(GOT)-Introduction
Week -10	Applications of GOT
Week -11	Basics of Character table
Week -12	Construction of Character table- C _{2v} point group
Week -13	Construction of Character table- C _{2v} point group
Week -14	Construction of Character table- C _{3v} point group
Week -15	Discussion of previous year question papers

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai –
600039

M.Sc., Degree Programme in Chemistry
Teaching plan (ODD semester – 2022 -2023)

SEMESTER: I

CLASS: I **M.SC. CHEMISTRY**

SUBJECT: GREEN CHEMISTRY

SUBJECT CODE : 22PACHE1A

SUBJECT IN CHARGE: DR.C.SRINIVASAN

WEEK	TOPICS TO BE COVERED
Week -1	Introduction to green chemistry
Week -2	Relevance and goals
Week -3	Twelve principles of green chemistry Reagents and solvents
Week -4	Green organic synthesis,oxidation and reduction reactions
Week -5	Green organic synthesis,oxidation and reduction reactions
Week -6	Ionic liquids -Introduction, synthesis.
Week -7	Physical properties and applications of ionic liquids
Week -8	Examples of reactions in which ionic liquids are used.
Week -9	Examples of reactions in which ionic liquids are used.
Week -10	Examples of reactions in which ionic liquids are used.
Week -11	Phase Transfer Catalysis for green chemistry
Week -12	Catalysts for green chemistry.Microbial polyester synthesis.
Week -13	Catalysts for green chemistry.Microbial polyester synthesis.
Week -14	Seminar
Week -15	Discussion of previous year question paper.

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai –
600039

M.Sc., Degree Programme in Chemistry
Teaching plan (EVEN semester – 2022 -2023)

SEMESTER: II

CLASS: I **M.SC. CHEMISTRY**

SUBJECT: POLYMER CHEMISTRY

SUBJECT CODE : 22PBCHE2B

SUBJECT IN CHARGE: DR.C.SRINIVASAN

WEEK	TOPICS TO BE COVERED
Week -1	Polymers - Introduction
Week -2	Coordination polymerisation, Mechanism of free radical polymerisation
Week -3	Mechanism of cationic and anionic polymerisation.
Week -4	Stereochemistry of polymers
Week -5	Physical properties of polymers.
Week -6	Polymer degradation. Molar mass of polymer- Definition.
Week -7	Determination of molar mass of polymers- light scattering method.
Week -8	Determination of molar mass of polymers- Gel permeation chromatography.
Week -9	Kinetics of free radical polymerisation.
Week -10	Kinetics of cationic polymerisation.
Week -11	Degree of polymerisation and inhibition.
Week -12	Discussion about some important polymers.
Week -13	Biodegradable polymers - introduction
Week -14	Seminar
Week -15	Discussion of previous year question papers.

DEPARTMENT OF CHEMISTRY
Dr. Ambedkar Government Arts College, (Autonomous), Vyasarpadi, Chennai –
600039

M.Sc., Degree Programme in Chemistry
Teaching plan (EVEN semester – 2022 -2023)

SEMESTER: IV
CLASS: II **M.SC. CHEMISTRY**
SUBJECT: PHYSICAL CHEMISTRY
SUBJECT CODE : 22PDCHC2

SUBJECT IN CHARGE: DR.C.SRINIVASAN

WEEK	TOPICS TO BE COVERED
Week -1	Applications of Group theory- Introduction
Week -2	Determination of vibrational modes- H ₂ O and NH ₃
Week -3	Determination of vibrational modes- BF ₃ and CH ₄ .
Week -4	Determination of vibrational modes- XeF ₄ .
Week -5	Determination of hybrid orbitals-H ₂ O and NH ₃
Week -6	Determination of hybrid orbitals- BF ₃ and CH ₄ .
Week -7	Determination of hybrid orbitals- XeF ₄ .
Week -8	Electronic spectra of ethylene.
Week -9	Electronic spectra of formaldehyde.
Week -10	Principles and instrumentation of SEM and TEM
Week -11	Principles and instrumentation of TEM and AFM.
Week -12	Principles and instrumentation of ESCA.Interpretation of spectra.
Week -13	Principles and applications of TGA and DTA.
Week -14	Principles and applications of DSC and DTG.
Week -15	Interpretation of various thermal analysis curves.

Dr. AMBEDKAR GOVT. ARTS COLLEGE (AUTONOMOUS), CHENNAI-39
DEPARTMENT OF VISUAL COMMUNICATION
B.Sc. VISUAL COMMUNICATION DEGREE PROGRAMME
TEACHING PLAN
ACADEMIC YEAR 2022-23 (EVEN SEMESTER)

Subject Name : **FILM STUDIES**
 Subject Code : 19UDVCC1
 Semester : **1V**
 Staff in Charge : Dr. C.JEBAKUMAR

Week	Topics to be Covered
Week-1	Unit-I :INTRODUCTION TO FILM STUDIES
Week-2	DISCUSSION ON FILM HISTORY, EVOLUTION, FILM TERMINOLOGY
Week-3	ELEMENTS OF FILM
Week-4	UNIT-1 & II FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	DIFFERENT FILM MOVEMENTS GERMAN EXTRESSIONISM
Week-6	Basics of film Editing , the principles of editing and its function evolution of montage theory.
Week-7	Unit III: Major film movements in world-German Expressionism , French New wave etc.
Week-8	SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Unit IV :Indian Cinema Brief History, Great masters of Indian system etc.
Week-10	Assignments followed by discussion
Week-11	Discussion on Great directors of Indian Cinema
Week-12	Unit V : Tamil Cinema – Brief History of Tamil cinema
Week-13	Contemporary Trends
Week-14	Revision.
Week-15	Model Examinations.

Subject Name : PHOTOJOURNALISM
 Subject Code : 10 UFVCEI
 Semester : VI
 Staff in Charge : Dr. C.JEBAKUMAR(Even Semester)

Week	Topics to be Covered
Week-1	Unit-I :INTRODUCTION TO PHOTOJOURNALISM
Week-2	DISCUSSION ON ELEMENTS OF NEWS , PHOTOJOURNALISM
Week-3	TYPES OF NEWS PHOTOGRAPHY
Week-4	UNIT-1 & II FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	PRINCIPLES OF PHOTOGRAPHIC COMPOSITION
Week-6	PICTURE STORIES , Discussion of illustration and Photographs, Technical Terms
Week-7	Unit III: Practice session of photographics clicks session of editing softwares etc.
Week-8	. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Unit IV :Assignment of news photography & themes
Week-10	Assignments followed by discussion
Week-11	Discussion on Assignemnts of students
Week-12	Unit V : Discussion of file formats and digital photography, colourcorrecttions etc.
Week-13	Assigned Projects
Week-14	Record preparation for photography
Week-15	Model Examinations.

Subject Name : PUBLICATION DESIGN
 Subject Code : 22UBVCC1
 Semester : II
 Staff in Charge : Dr. C.JEBAKUMAR(Even Semester)

Week	Topics to be Covered
Week-1	Unit-I :INTRODUCTION TO DIFFERENT PRINTING PROCCES
Week-2	DISCUSSION ON EVOLUTION AND DEVELOPMENT OF PRINTING
Week-3	DIFFERENT TYPES OF PUBLICATIONS
Week-4	UNIT-1 & II FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	DESIGN LAYOUT & PRINT PRODUCTION, DIGITAL PREPRESS
Week-6	E-PUBLISHING – Advantages & Disadvantages of E-Publishing , Pdf production and HTML , Copy Editing.
Week-7	software’s used for E-Publishing
Week-8	. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	Unit IV :Discussion on different Software’s used in Publishing Industry
Week-10	Assignments followed by discussion
Week-11	Discussion of different file formats
Week-12	Unit V : Printing Press management
Week-13	Assignments and discussion
Week-14	Contemporary Trends and Paper and Management of printing Press etc
Week-15	Model Examinations.

Subject Name : Project& Internships
 Subject Code : 19UFVCE2/19UFVCE3
 Semester : VI
 Staff in Charge : Dr. C.JEBAKUMAR/AGP GYATHRI
 /Dr. M.Devendran / M.RAJU(Even Semester)

Week	Topics to be Covered
Week-1	PROJECT PROPOSAL BY ASSIGNED STUDENTS
Week-2	DISCUSSION
Week-3	ASSIGNMENTS
Week-4	UNIT-1 & II FIRST INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-5	DISCUSSION & FIELD VISITS
Week-6	TOPIC SELECTION BY GIVEN STUDENTS
Week-7	FIELD WORK & DISCUSSION WITH RESPECTIVE GUIDES
Week-8	. SECOND INTERNAL ASSESSMENT TEST & ASSIGNMENT
Week-9	ASSIGNMENT & FIELD WORK
Week-10	FIELD WORK MONITORED BY RESPECTIVE GUIDES ASSIGNED FOR THE STUDENTS
Week-11	DISCUSSION ON RECORD WORK & INTERNSHIP RECORDS TO BE SUBMITTED
Week-12	FINAL DISCUSSION & ASSIGNMENT OF PROJECTS
Week-13	FIELD WORK & DISCUSSION
Week-14	Record preparation & Corrections
Week-15	Model Examinations. SUBMISSION OF PROJECT & INTERNSHIP REPORTS

Department of Visual Communication
Dr.Ambedkar Government Arts College (Autonomous), Vysarpadi, Chennai-39
B.Sc., Visual Communication
Teaching Plan

Academic Year: 2022-23
Semester: I /IV/ VI
Class: I Year
Subject Code: Contemporary Media
Subject: 22UAVCA1
Teacher: Dr. M. Devendran

WEEK	Topics to be Covered
Week- 1	Unit- I : History and evolution of Printing technology, Historical development of press in India, current scenario in Tamil Press, Types of Newspapers and Magazines in India, News Agencies in India.
Week- 2	Newspaper in the era of Digital Journalism: Growth of e-newspaper, competition, content and style of English and Tamil language newspapers and magazines – an overview.
Week- 3	Unit- II: Evolution and Growth of Radio broadcasting in India: Public Service Broadcasting, Commercial broadcasting–Vivid Bharathi, Growth of Private FM Radio channels, Community Radio, Ham radio.
Week- 4	Digital Radio Technology: Web Radio, Podcasting, Mobile Broadcasting, HD Radio, DRM, SDR.
Week- 5	Recent techniques of Audio recording and Sound Editing (Adobe Audition, Sound Forge, Audacity, Nuendo software)
Week- 6	Unit-3: Origin and development of Television in India, Characteristics and types of Television broadcasting.
Week- 7	Growth of Communication Satellites- SITE, Autonomy –Prachar Bharathi.
Week- 8	Growth of Cable TV and Private Channels, DTH, IPTV, TV on mobile, TRAI, Digital Television Technology : ATSC, QAM, CAS, Challenges and current trends in Indian Television
Week- 9	Unit- IV: Evolution of Photography, Digital revolution and latest Innovation in Photography: Mirror less Camera, HD Video, Mobile Phone Camera Technology- GPS Unit.
Week- 10	Motion pictures–Historical background, Digital Film Making: Digital Distribution and Exhibition
Week- 11	Growth of Multiplex, OTT Explosion, Present status, problems and prospects of film and entertainment industry with special reference to Regional cinema

Week- 12	Unit-V: Evolution of Telegraphy and Telephony in India, emerging of satellite telecommunication in India– Emerging of Information and communication technology, Fibre Optics.
Week- 13	Digital revolution in Television Technology, Mobile cellular technology – Generations of Mobile Networks,
Week- 14	WWW technology: Application of Web 2.0 and Web 3.0, Search engines, Blogosphere, Growth of Social media, Virtual reality, Artificial Intelligence.
Week- 15	Model Exam

Assignment

Week-2 : Assignment- 1

Week-5 : Assignment-2

Week-7 : Assignment -3

Week-10: Assignment -4

Week-12: Assignment-5

Department of Visual Communication
Dr. Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-39
B.Sc., Visual Communication
Teaching Plan

Academic Year: 2022-23
Semester: I /III/ V
Class: II Year
Subject Code: Computer Graphics (Practical)
Subject: 19UCVCA3
Teacher: Dr. M. Devendran

WEEK	Topics to be Covered
Week- 1	Introduction- Computer Graphics, 2D Graphics vs 3D Graphics
Week- 2	Introduction- Photoshop, Tools, Short Cut Keys (Presentations)
Week- 3	Basics introduction- Using softwares (Practical)
Week- 4	Logo Design
Week- 5	Logo Design
Week- 6	Visiting Card, Letter Head
Week- 7	Envelope, Identity Card Design
Week- 8	Company broucher or Pamphlet
Week- 9	Menu Card Design
Week- 10	Book Cover / Magazine Cover Design
Week- 11	News Letter Design
Week- 12	Poster Design (PSA)
Week- 13	Practical
Week- 14	Submission
Week- 15	Submission

Assignments

Week-2 : Assignment- 1

Week-5 : Assignment-2

Week-7 : Assignment -3

Week-10: Assignment -4

Week-12: Assignment-5

Department of Visual Communication
Dr.Ambedkar Government Arts College (Autonomous), Vysarpadi, Chennai-39
B.Sc., Visual Communication
Teaching Plan

Academic Year: 2020-21
Semester: I /III/ V (Odd Semester)
Class: III Year
Subject Code: Television Production-II (Practical)
Subject: 19UEVCC2
Teacher: Dr. M. Devendran

WEEK	Topics to be Covered
Week- 1	Short Story Writing
Week- 2	Screen Play Writing (Exercises)
Week- 3	Scripting: Documentary (Exercises)
Week- 4	Scripting : Commercial (Exercises)
Week- 5	Camera Operation –Basics -Practice
Week- 6	Framing- Shots, Angles -Practice
Week- 7	Camera Movement -Practice
Week- 8	Shooting Practices
Week- 9	Shooting- Crew
Week- 10	Shooting- Crew
Week- 11	Audio: Dubbing
Week- 12	Editing
Week- 13	Editing
Week- 14	Submission- Short Film
Week- 15	Submission- Short Film

Assignments

Week-2 : Assignment- 1

Week-5 : Assignment-2

Week-7 : Assignment -3

Week-10: Assignment -4

Week-12: Assignment-5

Department of Visual Communication
Dr.Ambedkar Government Arts College (Autonomous), Vysarpadi, Chennai-39
B.Sc., Visual Communication
Teaching Plan

Academic Year: 2022-23
Semester: I /IV/ VI
Class: I Year
Subject Code: Media Management
Subject: 19UFVCC1
Teacher: Dr. M. Devendran

WEEK	Topics to be Covered
Week- 1	Unit-I Media in Management- Definition and need and process of Media management
Week- 2	Principle and function of Media Management, Media as business and social institution, Grienier's development Model
Week- 3	Unit-2: Media organization: organizational structure of a newspaper- role and functions of each department in Newspaper,
Week- 4	Organizational structure of Public broadcasting: AIR and DD
Week- 5	Private satellite channels, production houses, Ownership pattern: Cross media ownership,
Week- 6	Media corporate, media conglomerate, merger and acquisition, media entrepreneurship
Week- 7	Unit-3: Project Management in Media: production project cycle,
Week- 8	Management themes and production management process
Week- 9	Project planning, production strategies, source of funds, budgeting, project responsibility: case studies
Week- 10	Unit-4: Economics of media: Circulation, advertising, marketing and cost factors, competition
Week- 11	Space and time selling. Media revenue models, race for TRP, Audience rating, Audience Analysis

Week- 12	Unit-5: Media and Globalization: concept of Globalization and impact on Indian media.
Week- 13	Foreign Direct Investment, Global media giants, media pluralism,
Week- 14	Indian media and entertainment industry: present status, problem and prospects.
Week- 15	Model Exam

Assignment

Week-2 : Assignment- 1

Week-5 : Assignment-2

Week-7 : Assignment -3

Week-10: Assignment -4

Week-12: Assignment-5

Department of Visual Communication
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-39
B.Sc., Visual Communication
Teaching Plan

Academic Year: 2022-23
Semester: I /III/ V
Class: II Year
Subject Code: Visual Design (Practical)
Subject: 22UBVCC2
Teacher: M. Raju

WEEK	Topics to be Covered
Week- 1	Understanding mass and weight: Lines of different thicknesses
Week- 2	Curves of different thicknesses, Shapes of different forms
Week- 3	Understanding emotions: Patterns—of different kinds
Week- 4	Distortion—of different kinds
Week- 5	Understanding the units: Lettering (fonts)
Week- 6	Alphabets,
Week- 7	Fonts Numbers
Week- 8	Designing stationery package:
Week- 9	Logo design
Week- 10	Letterhead
Week- 11	Visiting Cards
Week- 12	Designing Corporate communication
Week- 13	Brochures
Week- 14	Print Advertisements
Week- 15	Black & White, Colour

Assignments

Week-2 : Assignment- 1

Week-5 : Assignment-2

Week-7 : Assignment -3

Week-10: Assignment -4

Week-12: Assignment-5

Department of Visual Communication
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-39
B.Sc., Visual Communication
Teaching Plan

Academic Year: 2022-23
Semester: I /III/ V
Class: I Year
Subject Code: Social Media Communication (NON-Major Electives-II)
Subject: 22UBVCN2A
Teacher: M. Raju

WEEK	Topics to be Covered
Week- 1	Public Relations & its Audience, Scope & Structure of Public Relations Industry
Week- 2	Audience & Scope
Week- 3	Structure of Public Relations Industry
Week- 4	Movie Genres
Week- 5	Action, Spy Stories
Week- 6	Audience, Scope
Week- 7	Internet & the Global Media
Week- 8	The Case for The Global Village
Week- 9	Case against the Global Village
Week- 10	New Media Practices Ethics, Freedom & Regulation
Week- 11	Ethics
Week- 12	Freedom & Regulation
Week- 13	Media Convergence
Week- 14	The use of Social Media.
Week- 15	Impact of Social Media on Audience

Assignments

Week-2 : Assignment- 1

Week-5 : Assignment-2

Week-7 : Assignment -3

Week-10: Assignment -4

Week-12: Assignment-5

Department of Visual Communication
Dr.Ambedkar Government Arts College (Autonomous), Vyasarpadi, Chennai-39
B.Sc., Visual Communication
Teaching Plan

Academic Year: 2022-23
Semester: I /III/ V
Class: II Year
Subject Code: Television Production-I (Theory)
Subject: 19UDVCC2
Teacher: M. Raju

WEEK	Topics to be Covered
Week- 1	Introduction of visualization: Different approaches to visualization – TV, Films, and Ad films.
Week- 2	Types of telecasting, Production standards NTSC, PAL, Secametc.
Week- 3	Television Crew, an overview of direction, art direction, floor management- indoor & outdoor, production management, and budget preparation.
Week- 4	Planning for the shoot: Selection of cast, costumes, locations, set & design, and Research
Week- 5	Locations: In-door On-sights sets, -- Outdoor on-sight sets,
Week- 6	blue matte.
Week- 7	Visual capturing: Camera techniques & operation, Types of the camera, Video formats (VHS, SVHS, U-MATIC, BETA, DIGITAL), framing, shots & movements (wide, medium, close-ups, shadow, zoom, pan, tilt, aerial, etc.), usage of various types of camera lenses (Normal, Tele, Zoom, etc.), usages of various filters (day, night, colour correcting filter, diffusion filter)
Week- 8	usage of various types of camera lenses (Normal, Tele, Zoom, etc.), usages of various filters (day, night, colour correcting filter, diffusion filter)
Week- 9	objectives TV lighting, various types of Lights (baby, Junior, Senior, etc.), colour temperature, lighting for different situations (interviews, indoor, out-door), types of lighting(Back, Front, full, semi)
Week- 10	Audio enabling: Audio online or offline. Knowledge about audio recording (mono, stereo, surround sound, etc.).
Week- 11	Usage of various kinds of mics (Dynamic mic, condenser mic, ribbon mic, Uni-directional, Bi-directional,

	Omni-directional mics, Hand mic, Headset mic, quadraphonic mic, and wireless mic, lapel, etc.,)
Week- 12	Knowledge about audio recording (mono, stereo, surround sound, etc.,).
Week- 13	Final out-put: Editing procedure, assembling shots, symbolic editing, and editing errors. The language of editing and shooting—sound in editing categories of sound, post-synchronization, voice-over or narration, music and dubbing, Video Editing – linear, non-linear, types of editing modes (assemble mode, insert mode, online mode)
Week- 14	The language of editing and shooting—sound in editing categories of sound, post-synchronization, voice-over or narration, music and dubbing, Video Editing – linear, non-linear, types of editing modes (assemble mode, insert mode, online mode)
Week- 15	computer editing – time code roll editing, etc., Television graphics & titling and specials effects, Audio – Dubbing, Background Music, synchronizing of video and audio, voice-over (narration). Presentation skills, recording live programmes.

Assignments

Week-2 : Assignment-1

Week-5 : Assignment-2

Week-7 : Assignment -3

Week-10: Assignment -4

Week-12: Assignment-5



[Signature] 10/10/2020
PRINCIPAL

Dr. Ambedkar Govt.
Arts College, Vyasarpadi
Chennai-600 039