



*Ahmednagar Jilha Maratha Vidya Prasarak Samaj's*

# **New Arts, Commerce and Science College, Parner**

**Tal. Parner, Dist. Ahmednagar - 414 302 (Maharashtra)**



## **Course Outcome (COs)**

## **Faculty of Science**

## Contents

<b>1. B. Sc. Computer Science.....</b>	<b>3</b>
F.Y.B.Sc. ....	3
S.Y.B.Sc. ....	8
T.Y.B.Sc. ....	11
<b>2. M.Sc. Computer Science.....</b>	<b>16</b>
M.Sc. I (Computer Science) .....	16
M.Sc.-II (Computer Science).....	18

# 1. B. Sc. Computer Science

F.Y.B.Sc.

## Semester I

### CS-111: Problem Solving using Computer and 'C' Programming

After completion of the course students will be able to

- CO 1: List the computer languages.
- CO 2: Learn the algorithm, flowchart and pseudo code.
- CO 3: Write programs using control structures and arrays in 'C'.
- CO 4: Learn & apply the concepts of data type, loop, function, array
- CO 5: Execute a program.

### CS-112: Database Management Systems

After completion of the course students will be able to

- CO 1: Define databases.
- CO 2: Learn the types of databases.
- CO 3: Design E-R Model
- CO 4: Learn relational models.
- CO 5: Learn data model.
- CO 6: Implement relational model using psql

### CS-113: Practical course on CS 231 and CS 232

After completion of the course students will be able to

- CO 1: Implement the program using C language
- CO 2: Learn the psql query
- CO 3: Design program using C program

### MTC-111: Matrix Algebra

After completion of the course students will be able to

- CO 1: Define the term's
- CO 2: Explain the term's
- CO 3: Discuss the linear transformation, null space, column space, rank
- CO 4: Solve the systems of linear equations
- CO 5: Solve the problems

### MTC-112: Discrete Mathematics

After completion of the course students will be able to

- CO 1: Learn propositional logic
- CO 2: Construct truth table

- CO 3:** Show that logical equivalence
- CO 4:** Define types of relations
- CO 5:** Draw the diagrams
- CO 6:** State algorithms
- CO 7:** Solving recurrence relations

## **MTC-113: Mathematics Practical**

After completion of the course students will be able to

- CO 1:** Learn all definition and basic concepts.
- CO 2:** Solve examples on transformations.
- CO 3:** Solve examples by using algorithms.

## **ELC-111: Semiconductor Devices and Basic Electronic Systems**

After completion of the course students will be able to

- CO 1:** Learn the basic semiconductor devices
- CO 2:** Learn to draw the symbol and circuit
- CO 3:** Explain the concept of analog electronics
- CO 4:** Solve the example
- CO 5:** Describe the types of BJT, MOSFET
- CO 6:** Learn the concept of analog to digital Converters and vice versa

## **ELC-112: Principles of Digital Electronics**

After completion of the course students will be able to

- CO 1:** Learn the different number system
- CO 2:** Inter conversion from one number into another number system
- CO 3:** Define different laws of Boolean algebra
- CO 4:** Simplify the Boolean expression
- CO 5:** Explain the concept
- CO 6:** Describe the concept
- CO 7:** Design the basic circuit

## **ELC-113: Electronics Practical**

After completion of the course students will be able to

- CO 1:** Build and Test the circuit
- CO 2:** Calculate the result and analyze the result
- CO 3:** Plot the graphs
- CO 4:** Learn the working using digital components

## **CSST 111: Descriptive Statistics I**

After completion of the course students will be able to

- CO 1:** Learn the importance, Scope and limitation of statistics.

- CO 2: Define different type of Data, median and mode.
- CO 1: Explain the concept
- CO 2: Solve the Examples
- CO 3: Analyse statistical data graphically
- CO 4: Distinguish between row and central moment
- CO 5: Write a note

## CSST 112: Mathematical Statistics

After completion of the course students will be able to

- CO 1: Define sample space and its types
- CO 2: State and Prove the theorem
- CO 3: Explain the concept
- CO 4: Solve the problem
- CO 5: Find the distribution function
- CO 6: Learn the numerical problem related to real life problem using statistics

## CSST 113: Statistics Practical I

After completion of the course students will be able to

- CO 1: Compute various measures of central tendency, dispersion, skewness, etc.
- CO 2: Explain the concept.
- CO 3: Evaluate the binomial and Poisson distributions.
- CO 4: Compute the measures of attribute.
- CO 5: Learn the statistical softwares.

## Semester –II

### CS-121: Advanced ‘C’ Programming

After completion of the course students will be able to

- CO 1: Define macros in ‘C’
- CO 2: Write programs using Pointer, Structure and Union in ‘C’.
- CO 3: Learn & apply the concepts of file handling using C programming
- CO 4: Execute a program.

### CS-122: Relational Database Management System

After completion of the course students will be able to

- CO 1: Define terms
- CO 2: Describe the fundamental elements of Model Entity-Relationship diagrams
- CO 3: Formulate Queries using SQL and Relational Formal Query Languages
- CO 4: Apply different normal forms to design the Database
- CO 5: Summarize concurrency control protocols and recovery algorithms
- CO 6: Identify suitable Indices and Hashing mechanisms for effective storage and retrieval of Data

## **CS-123: Practical course on CS 231 and CS 232**

After completion of the course students will be able to

- CO 1:** Implement the program using C language
- CO 2:** Learn the psql query
- CO 3:** Design program using C program

## **MTC-121: Linear Algebra**

After completion of the course students will be able to

- CO 1:** Define the term vector space and Subspace
- CO 2:** Explain the term eigenvalue and eigenvector, diagonalization
- CO 3:** State and Prove theorem
- CO 4:** Solve the Problems

## **MTC-122: Graph Theory**

After completion of the course students will be able to

- CO 1:** Define the terms
- CO 2:** Learn types of Graphs
- CO 3:** Basic terminologies and properties of graphs
- CO 4:** Matrix representation
- CO 5:** Solving problems

## **MTC-123: Mathematics Practical**

- CO 1:** Learn all definition and basic concepts.
- CO 2:** Solve examples on vector space.
- CO 3:** Solve examples by Matrix representation
- CO 4:** Draw the Graph.

## **ELC-121: Instrumentation System**

After completion of the course students will be able to

- CO 1:** Learn the basic of sensor and transducer and its types
- CO 2:** Learn different specification of sensor
- CO 3:** Learn the different types of smart sensors
- CO 4:** Explain the opamp as signal conditioning
- CO 5:** Solve the problem
- CO 6:** Learn the application of OP-amp

## **ELC-122: Basics of Computer Organization**

After completion of the course students will be able to

- CO 1:** Learn the basic sequential circuit
- CO 2:** Explain the sequential circuit using truth table

- CO 3:** Learn the basic computer organization concept
- CO 4:** Learn the basic of memory organization and its concept.
- CO 5:** Learn the types of memory and problems

## **ELC-123: Electronics Practical**

After completion of the course students will be able to

- CO 1:** Build and Test the circuit
- CO 2:** Calculate the result and analyze the result
- CO 3:** Plot the graphs
- CO 4:** Learn the working using digital components

## **CSST 121: Method of applied Statistics**

After completion of the course students will be able to

- CO 1:** Define the term's
- CO 2:** Explain Some Concepts
- CO 3:** Distinguish Between
- CO 4:** Learn the various Concepts
- CO 5:** Solve the Problems
- CO 6:** Numerical Problems Related to real life Situation

## **CSST 122: Continuous Probability distribution and testing of Hypothesis**

After completion of the course students will be able to

- CO 1:** Define the concept
- CO 2:** Give real life situation in continuous probability distribution
- CO 3:** State and prove distribution
- CO 4:** Discuss the properties
- CO 5:** Solve the problem
- CO 6:** Explain the use of computer in simulation
- CO 7:** Learn the numerical problem related to real life problem using statistics

## **CSST 123: Statistics Practical**

After completion of the course students will be able to

- CO 1:** Learn the relationship between two variables using scatter plot.
- CO 2:** Compute.
- CO 3:** Evaluate the normal distributions.
- CO 4:** Apply inferential method
- CO 5:** Create model sample.

## S.Y.B.Sc.

### Semester-I

#### CS-231: Data Structures and Algorithm-I

After completion of the course students will be able to

- CO 1: Learn to organize the data structures in solving various problems.
- CO 2: Learn to differentiate the usage of various structures in problem solution.
- CO 3: Implementing algorithms to solve problems using appropriate data structures.
- CO 4: Apply algorithm for solving problems.
- CO 5: Describe the basic concepts about stack, queues, list tree and graphs
- CO 6: Analyze the concepts of dynamic memory management, data types, algorithms.

#### CS-232: Software Engineering

After completion of the course students will be able to

- CO 1: Learn the basic software engineering methods and practices
- CO 2: Learn to compare and chose a process model for a software project.
- CO 3: Identify requirements analyze and prepare models.
- CO 4: Learn the software process models such as the waterfall and spiral models.
- CO 5: Describe software engineering layered technology and Process frame work
- CO 6: Prepare the SRS, Design document, Project plan of a given software system.

#### CS-233: Practical Course on CS-232 and CS-233

After completion of the course students will be able to

- CO 1: Implement the Tree using C language
- CO 2: Implement the stack using C language
- CO 3: Implement the queues using C language
- CO 4: Implement sorting algorithm using C language

#### MTC-231: Groups and Coding Theory

After completion of the course students will be able to

- CO 1: Recall the concept of group theory.
- CO 2: Classify types of groups.
- CO 3: Describe the properties of groups.
- CO 4: Solve the examples.
- CO 5: Learn the coding and decoding

#### MTC-232: Numerical Techniques

After completion of the course students will be able to

- CO 1: Define The Basic Concept Of Operators
- CO 2: Find the Difference of Polynomials



- CO 3: Derive the Formulae
- CO 4: Solve the Problem's

## **MTC-233: Python programming language-I**

After completion of the course students will be able to

- CO 1: Learn the basic principle of python
- CO 2: analyze the string list and tuple
- CO 3: construct the various matrices in python programming
- CO 4: Write the program using python and execute.

## **ELC-231: Microcontroller Architecture & Programming**

After completion of the course students will be able to

- CO 1: Learn the concept of microcontroller like memory, Registers
- CO 2: To write programs for 8051 microcontrollers
- CO 3: Learn how to interface I/O peripherals to 8051 microcontrollers
- CO 4: Learn timer and counter in 8051
- CO 5: Write the program for 8051 and execute

## **ELC-232: Digital Communication and Networking**

After completion of the course students will be able to

- CO 1: Define and explain terminologies of data communication
- CO 2: Learn the impact and limitations of various digital modulation techniques
- CO 3: Learn the need of spread spectrum schemes.
- CO 4: Identify functions of data link layer and network layer.
- CO 5: Explains Concepts in the computer network
- CO 6: Describe the concept of modulation and its types

## **ELC-233: Practical Course**

After completion of the course students will be able to

- CO 1: Design and build his/her own microcontroller based projects.
- CO 2: Acquire skills of Embedded C programming
- CO 3: Know multiplexing and modulation techniques.
- CO 4: Build and test own network and do settings.

## **Semester-II**

## **CS-241: Data Structures and Algorithm-II**

After completion of the course students will be able to

- CO 1: Define the concept of Data structure
- CO 2: Solve the problem involving graph, tree and heaps

- CO 3:** Analyze the concept of array and linked list in data structure
- CO 4:** Describe the hash function and concepts of hash function
- CO 5:** Analyze different algorithm in data structure.
- CO 6:** Explain the concepts of collision & its resolution method

## **CS-242: Computer Networks-I**

After completion of the course students will be able to

- CO 1:** Learn the OSI and TCP/IP Reference Models.
- CO 2:** Learn the working of various protocols.
- CO 3:** Analyze the requirements for a given organizational structure and select the most appropriate networking architecture and technologies

## **CS-243: Practical Course on CS-241 and CS-242**

After completion of the course students will be able to

- CO 1:** Implement the Link list using C language
- CO 2:** Implement the tree using C language
- CO 3:** Implement the graph using C language

## **ELC-241: Embedded System Design**

After completion of the course students will be able to

- CO 1:** Learn the difference between general computing and the embedded systems.
- CO 2:** Know the fundamentals of embedded systems.
- CO 3:** Learn the use of Single board Computer for an embedded system application.
- CO 4:** Learn the programming environment to develop embedded systems.
- CO 5:** Develop familiarity with tools used to develop in an embedded environment.

## **ELC242: Wireless Communication and Internet of Things**

After completion of the course students will be able to

- CO 1:** Know working of wireless technologies.
- CO 2:** Learn 3G and 4G Cellular Network Technologies for Data Connections.
- CO 3:** Learn working principles of short range communication application
- CO 4:** Get introduce to upcoming technology of Internet of Things
- CO 5:** Explore themselves and develop new IoT based applications

## **ELC-243: Practical Course**

After completion of the course students will be able to

- CO 1:** Design and develop own smart applications using Rasberry-Pi
- CO 2:** Write Python program for simple applications
- CO 3:** Build own IoT based system

## MTC-241: Computational Geometry

After completion of the course students will be able to

- CO 1: Define the terms
- CO 2: Learn the transformation
- CO 3: Explain the basic concept of projection, plane and space curve
- CO 4: Solve the problems

## MTC-242: Operational Research

After completion of the course students will be able to

- CO 1: Define the terms
- CO 2: State merits and demerits
- CO 3: Write the algorithm
- CO 4: Formulation of the given problems
- CO 5: Solution by graphical method
- CO 6: Learn the Numerical Problem

## MTC-243: Python Programming Language-II

After completion of the course students will be able to

- CO 1: Use the basic library : numpy and matplotlib
- CO 2: Plot the 2D and 3D function graphs
- CO 3: Apply the various transformation

## T.Y.B.Sc.

### CS-351: Operating system-I

After completion of the course students will be able to

- CO 1: Define the terms.
- CO 2: Learn & Implement Process Scheduling Algorithm.
- CO 3: Learn Process and Thread Synchronization.
- CO 4: Learn & implement Page Replacement Algorithm.
- CO 5: Solve the Example.

### CS-352: Computer Networks-II

After completion of the course students will be able to

- CO 1: Define the terms.
- CO 2: Learn different protocols of Application layer.
- CO 3: Learn Data flow from one device to another device using network.
- CO 4: Develop Learning of technical aspect of Multimedia Systems

- CO 5: Identify security goals, problems & Solutions.
- CO 6: Learn and apply cryptographic techniques for data security

## **CS-353: Web Technologies – I**

After completion of the course students will be able to

- CO 1: Learn skills about to create web pages.
- CO 2: Create web pages using html & CSS.
- CO 3: Learn about basic knowledge of PHP.
- CO 4: Design web pages using PHP and html.
- CO 5: Learn core PHP Knowledge.

## **CS-354: Foundation of Data Science**

After completion of the course students will be able to

- CO 1: Learn relevant programming ability
- CO 2: Learn data scientist Tools
- CO 3: Detect and diagnose common data issues.
- CO 4: Demonstrate proficiency with statistical analysis of data.
- CO 5: Prepare results using data visualization techniques.

## **CS-355: Object Oriented Programming using Java-I**

After completion of the course students will be able to

- CO 1: Define Terms
- CO 2: Learn the concept of classes, object, packages
- CO 3: Develop GUI based application
- CO 4: Learn object oriented concept.
- CO 5: Build Application using AWT and SWING
- CO 6: Use features of language.

## **CS-356: Theoretical Computer Science**

After completion of the course students will be able to

- CO 1: Define Terms.
- CO 2: Learn the Regular Language
- CO 3: Learn Context Free Language
- CO 4: Learn Context Sensitive Language and Unrestricted Language.
- CO 5: Learn the use of automata during language design.
- CO 6: Relate various automata and Languages

## **CS-3510: Python Programming**

After completion of the course students will be able to

- CO 1: Define Terms.
- CO 2: Develop logic for problem solving.
- CO 3: Learn Basic Principles of python.
- CO 4: Determine the methods to create and develop Python.

**CO 5:** Learn data, operations, conditions, loops, functions etc.

**CO 6:** Develop a small application project.

## **CS-351: Blockchain Technology**

After completion of the course students will be able to

**CO 1:** Define the terms.

**CO 2:** Learn the fundamentals of Blockchain Technology.

**CO 3:** Learn Blockchain programming

**CO 4:** Basic knowledge of Smart Contracts and how they function

**CO 5:** Explain Algorithms and Puzzle of BCT.

## **CS-357: Practical Course based on CS - 351**

After completion of the course students will be able to

**CO 1:** Implement Process Scheduling algorithm using C programming

**CO 2:** Implement Page Replacement algorithm using C Programming

**CO 3:** Implement Operation on Process.

**CO 4:** Create operating System shell.

## **CS-358: Practical Course based on CS – 353 and CS - 354**

After completion of the course students will be able to

**CO 1:** Develop dynamic and interactive Web Page

**CO 2:** Prepare data for use with a variety of statistical methods.

**CO 3:** Perform exploratory data analysis.

**CO 4:** Create CSS Application.

## **CS-359: Practical Course based on CS – 355**

After completion of the course students will be able to

**CO 1:** Implement use of Java tools.

**CO 2:** Implement array of objects and exception handling.

**CO 3:** Implement file handling.

**CO 4:** Create GUI program using AWT.

**CO 5:** Apply inheritance and interface.

## **CS-361: Operating Systems-II**

After completion of the course students will be able to

**CO 1:** Define the terms and Principles

**CO 2:** Learn deadlocks and File System

**CO 3:** Learn Scheduling storage or disk for processes

**CO 4:** Describe Distributed Operating System and its architecture.

**CO 5:** List the Mobile Operating System

**CO 6:** Solve the Example.

## **CS-362: Software Testing**

After completion of the course students will be able to

- CO 1:** Define the terms.
- CO 2:** Learn various software testing methods and strategies.
- CO 3:** Learn variety of software metrics and defects.
- CO 4:** Design and Apply test cases, test plans and review reports.
- CO 5:** Learn the latest testing methods used in the software industries

## **CS-363: Web Technologies - II**

On completion of the course, students will be able to

- CO 1:** Create XML documents Schemas
- CO 2:** Build interactive web applications using AJAX.
- CO 3:** Build dynamic web pages using javascript.
- CO 4:** Learn to write well-formed valid XML document.
- CO 5:** Write Server side application called JSP.

## **CS-364: Data Analytics**

On completion of the course, students will be able to

- CO 1:** Define the terms.
- CO 2:** Apply appropriate models of analysis, assess the quality of input..
- CO 3:** Analyse data, choose relevant models and algorithms for respective applications
- CO 4:** Learn different data mining techniques.
- CO 5:** Apply modelling and data analysis techniques.

## **CS-365: Object Oriented Programming using Java – II**

On completion of the course, student will be able to

- CO 1:** Define the terms.
- CO 2:** Learn Database Connectivity (JDBC).
- CO 3:** Learn and create dynamic web pages, using Servlets and JSP.
- CO 4:** Work with basics of framework to develop secure web applications
- CO 5:** Learn the Spring Framework.

## **CS-366: Compiler Construction**

On completion of the course, students will be able to

- CO 1:** Define the terms.
- CO 2:** Learn the process of scanning and parsing.
- CO 3:** Learn the conversion code.
- CO 4:** Learn tools like LEX and YACC.
- CO 5:** Implement algorithms.

## **CS-3610: Software Testing Tools**

On completion of the course, students will be able to

- CO 1:** Define the terms.

- CO 2:** Learn various software testing methods and strategies.
- CO 3:** Learn variety of software metrics and identify and manage defects.
- CO 4:** Design test cases and test plans and review reports.
- CO 5:** Learn the latest testing tools used in the software industries

## **CS-3611: Project**

On completion of the course, students will be able to

- CO 1:** Create project Documentation.
- CO 2:** Able to select Project topics.
- CO 3:** Create project Design
- CO 4:** Able to choose Computer programming language for project.
- CO 5:** Implement Project using Computer Programming language.
- CO 6:** Design a Project.

## **CS-367: Practical course based on CS 361**

On completion of the course, students will be able to

- CO 1:** Implement Banker's Algorithm using C Programming.
- CO 2:** Implement File System Operation using C Programming
- CO 3:** Implement Disk Space Management using C Programming.
- CO 4:** Implement Mobile OS Programming.

## **CS-368: Practical Course based on CS - 363 and CS – 364**

On completion of the course, students will be able to

- CO 1:** Learn different technologies used at client Side Scripting Language.
- CO 2:** Build dynamic website..
- CO 3:** Able to design and handling the errors in dynamic website.

## **CS-369: Practical Course based on CS - 365**

On completion of the course, students will be able to

- CO 1:** To Learn database Programming using Java
- CO 2:** Create dynamic web pages using Servlets and JSP.
- CO 3:** Work with basics of framework to develop secure web applications.
- CO 4:** Learn the collection classes.
- CO 5:** Create a client server programme using socket.

## 2. M.Sc. Computer Science

### M.Sc. I (Computer Science)

#### Semester I

#### CSUT111: Paradigm of Programming Language

On completion of the course, students will be able to

- CO 1: Think about programming languages analytically.
- CO 2: Separate syntax from semantics.
- CO 3: Compare programming language design.
- CO 4: Learn new language more quickly.
- CO 5: Learn small program in different languages.

#### CSUT112: Design and Analysis of Algorithm

On completion of the course, students will be able to

- CO 1: Define the terms.
- CO 2: Learn necessary analysis of algorithms
- CO 3: Learn different design strategies
- CO 4: Learn the use of data structures in improving algorithm performance
- CO 5: Learn classical problems.
- CO 6: Design the algorithms for solving the Problem

#### CSUT113: Database Technologies

On completion of the course, students will be able to

- CO 1: Define the terms.
- CO 2: Learn the concept of NoSQL technology
- CO 3: List an insight into the different types of NoSQL databases
- CO 4: Able to choosing what database technologies to used based on application.

#### CSDT114C: Web Services

On completion of the course, students will be able to

- CO 1: Define the Terms.
- CO 2: Explain the Architectures.
- CO 3: Learn the details of web services technologies.
- CO 4: Learn how to implement and deploy web service client and server
- CO 5: Explain interoperability between different frameworks
- CO 6: Learn the concept of the Restful system.

#### CSDP114C: Web Services Practical

On completion of the course, students will be able to

- CO 1: Able to create own web service.
- CO 2: Apply various concepts of web services in programming.



**CO 3:** Create Web Services using SOAP.

## **CSUP115: Practical on PPL and Database Technologies**

On completion of the course, students will be able to

- CO 1:** Learn the scala language.
- CO 2:** Learn framework of mongoDB.
- CO 3:** Solve mongoDB assignments.
- CO 4:** Apply scala programming for real life task.

## **Semester II**

### **CSUT121: Advanced Operating System**

On completion of the course, students will be able to

- CO 1:** Define the terms.
- CO 2:** Learn the concept Kernel.
- CO 3:** Describe the various types of System calls.
- CO 4:** Explain the concepts of process.
- CO 5:** Learn the concept Memory Management
- CO 6:** Illustrate the signal Concepts.

### **CSUT122: Mobile Technologies**

On completion of the course, students will be able to

- CO 1:** Define the terms
- CO 2:** Learn the wireless communication systems.
- CO 3:** Explain various aspects of mobile and ad-hoc networks.
- CO 4:** Learn the issues relating to Wireless applications
- CO 5:** Learn the Mobile security

### **CSUT123: Software Project Management**

On completion of the course, students will be able to

- CO 1:** Define the terms.
- CO 2:** Learn the Software Metrics and Project Management
- CO 3:** Examine Requirements Elicitation, Project Management.
- CO 4:** Learn to select and apply project management techniques.
- CO 5:** Design and execution of system test cases.

### **CSDT124A: Project**

On completion of the course, students will be able to

- CO 1:** Create project Documentation.
- CO 2:** Select Project topics.
- CO 3:** Create project Design
- CO 4:** Choose Computer programming language for project.
- CO 5:** Implement Project using Computer Programming language.

**CO 6:** Create Project.

## **CSDP124A: Project Related Assignments**

On completion of the course, students will be able to

- CO 1:** Learn the problem.
- CO 2:** Generate solution on Problem.
- CO 3:** Solve Assignments
- CO 4:** Implement Project using Computer Programming language.
- CO 5:** Create Project.

## **CSUP125: Practical on Advanced OS & Mobile Technologies**

On completion of the course, students will be able to

- CO 1:** Design program for concept of process.
- CO 2:** Use system calls in programming.
- CO 3:** Use various commands used in Linux
- CO 4:** Perform various operations on file.

## **M.Sc.-II (Computer Science)**

## **CSUT231: Software Architecture and Design Patterns**

On completion of the course, students will be able to

- CO 1:** Define the terms.
- CO 2:** Make solution for real-world problems.
- CO 3:** Predict outcomes using Machine Learning algorithms.
- CO 4:** Use specific frameworks as per applications need.
- CO 5:** Design java applications using design pattern techniques.

## **CSUT232: Machine Learning**

On completion of the course, students will be able to

- CO 1:** Define the Terms.
- CO 2:** Describe characteristics of machine learning .
- CO 3:** Predict outcomes using Machine Learning algorithms
- CO 4:** Evaluate Machine Learning models efficiency using suitable metrics.
- CO 5:** Design applications using machine learning techniques.
- CO 6:** Design Machine Learning Algorithms

## **CSUT233: Web Framework**

On completion of the course, students will be able to

- CO 7:** Define the terms.
- CO 8:** Use as a part of full stack development.
- CO 9:** Develop web applications in Python.

- CO 10:** Learn asynchronous programming.
- CO 11:** Build and deploy a robust Django Web App.
- CO 12:** Integrate with Restful web services.

### **CSUP235: Practical on Software Architecture and Design Pattern and Machine Learning to learn how to Develop Software Projects.**

On completion of the course, students will be able to

- CO 1:** Define the terms.
- CO 2:** Perform Machine Learning Algorithm using python.
- CO 3:** Design Solution using Java Programming.
- CO 4:** Design Attractive Web pages.

### **CSDT234C: Project**

On completion of the course, students will be able to

- CO 1:** Learn the details of Project Work.
- CO 2:** Learn how to Develop Software Projects.
- CO 3:** Explore interoperability between different frameworks.

### **CSDP234C: Project Related Assignments**

On completion of the course, students will be able to

- CO 1:** Learn the problem.
- CO 2:** Generate solution on Problem.
- CO 3:** Solve Assignments
- CO 4:** Complete Project using Computer Programming language.
- CO 5:** Create Project.

### **CSUIT241: Industrial Training / Institutional Project**

On completion of the course, students will be able to

- CO 1:** Learn the details of Project Work.
- CO 2:** Design the industrial live Project.
- CO 3:** Apply the skill of programming in project.
- CO 4:** Work on different stage of Project.
- CO 5:** Explore interoperability between different frameworks