



Rayat Shikshan Sanstha's
Savitribai Phule Mahila Mahavidyalaya, Satara

Course Outcomes (COs)

After studying these courses students will be able to:

❖ BCA-I, Sem-I	
▪ SEM-I-Fundamentals of Computer	
CO1	Define basic concepts of computer.
CO2	Describe peripheral devices and number systems.
CO3	Analyse operating environment.
CO4	Describe the different number systems and the basics of programming.
CO5	Identify the impact of computers on society.
CO6	Apply the Linux Operating system commands.
▪ Introduction to Programming using 'C'	
CO1	Describe algorithms and draw flowcharts for solving Mathematical problem.
CO2	Design and develop Computer programs, analyzes, and interprets the concept of pointers, declarations, initialization, operations on pointers and their usage.
CO3	Describe the sequence of the program and its logical outputs.
CO4	Define data types and use them in simple data processing applications also use the concept of array of structures and file Handling.
CO5	Analyse strings in C program.
CO6	Develop confidence for self education and ability for life-long learning needed for computer language.

▪ Principles of Management	
CO1	Assess the influence of historical forces on current practice of management.
CO2	Describe frameworks in the four functions of management.
CO3	Explain leadership styles to anticipate the consequences of each leadership style.
CO4	Describe management principles into management practices.
CO5	Identify and apply appropriate management techniques for organizations.
CO6	Acquire social responsibility involved in business situations.
▪ Business Communication	
CO1	Identify English oral and written mode in communication.
CO2	Make presentations in English.
CO3	Write business correspondence.
CO4	Write an application for job.
CO5	Apply communication skills in English.
▪ Office Automation	
CO1	Identify the components of office automation.
CO2	Illustrate operations using Power Point.
CO3	Surf details through Internet.
CO4	Analyse operations using MS Word.
CO5	Familiarize the students in preparation of documents and presentations with office automation tools.
CO6	Discuss about the use of Office Package and internet in daily life.
▪ Lab Course –I Based on CC102	
CO1	Trace the execution of programs written in C language.

CO2	Write the C code for a given algorithm.
CO3	Illustrate Programs with pointers and arrays.
CO4	Analyse pointer arithmetic and file handling.
▪ Lab Course-II Based on AEC 105	
CO1	Apply the internet and internet tools.
CO2	Perform operations using MS Word and PowerPoint.
CO3	Draft business presentations using PowerPoint.
❖ SEM-II	
▪ Database Management System	
CO1	Describe the basic concepts of DBMS and various databases used in real applications.
CO2	Demonstrate the principles behind systematic database design approaches.
CO3	Design the database structure by applying the concepts of Normalization.
CO4	Illustrate the database design principles.
CO5	Design the database structure by applying the concepts of Entity relational model.
CO6	Explain the MS-Access for database creation and handling transactions.
▪ Operating System	
CO1	Analyse Operating Systems and their types.
CO2	Apply the concept of a process and scheduling algorithms.
CO3	Explain concept of deadlock and different ways to handle it.
CO4	Describe various memory management techniques and file system.
CO5	Write an argument using logical notation and determine if the argument is valid or not.
CO6	Apply graph algorithms to solve problems.

▪ Object Oriented Programming Using C++	
CO1	Describe object-oriented programming and advanced C++ concept.
CO2	Apply the concepts of object, classes and constructor.
CO3	Design C++ Programs based on object, class, inheritance, abstraction, encapsulation, dynamic binding and polymorphism.
CO4	Illustrate concept of polymorphism in program.
CO5	Apply accounting terminology, procedures and systems of maintaining accounting records.
CO6	Explain financial statements.
CO7	Design company, enter accounting voucher entries and also print financial statements, etc. in Tally.
CO8	Demonstrate MIS reports in Tally ERP. Mathematical Foundations For Computer Applications.
CO9	Define set theory, functions and relations concepts, matrix needed for designing and solving problems.
CO10	Apply simple mathematical proofs and possess the ability to verify them.
▪ Lab Course-III Based on CC201 and AEC 204	
CO1	Apply MS-Access DBMS and design database.
CO2	Perform operations on data using MS access features.
CO3	Create company using Tally ERP.
CO4	Perform accounting using Tally ERP.
▪ Lab Course-IV Based on CC 203	
CO1	Identify difference between the top-down and bottom-up approach.
CO2	Describe the object-oriented programming approach in connection with C++
CO3	Apply the concepts of object-oriented programming.

CO4	Illustrate the process of data file manipulations using C++
❖ BCA-II, SEM-III	
▪ Web Technology	
CO1	Analyse basics of website and web development life cycle.
CO2	Design website using HTML and CSS.
CO3	Create web pages using XHTML and Cascading Style Sheets.
CO4	Design the script for website development.
CO5	Analyse the importance and working of web technology.
CO6	Apply HTML5.
▪ Computer Network and Internet	
CO1	Define the concept of computer network.
CO2	Explain the computer networks.
CO3	Identify different components required to build different networks.
CO4	Analyse the functions of network layers and different protocols.
CO5	Discuss the important features of the Internet and Web.
CO6	Illustrate essential computer network protocols.
▪ Data Structure using C	
CO1	Describe appropriate data structure for the required problems using a programming language such as C.
CO2	Identify various searching & sorting techniques.
CO3	Explain the importance of data structures in context of writing efficient programs.
CO4	Describe various data structures viz. Stacks, Queues.
CO5	Explain the concept of object thinking within the framework of functional model.
CO6	Analyse Linked Lists and Trees.

▪ Elements of Statistics	
CO1	Explain various term used in Statistics.
CO2	Describe the Measures of Central Tendency.
CO3	Describe the Measures of Dispersion.
CO4	Analyse Bivariate data (Correlation and Regression).
CO5	Elaborate Sampling Techniques and Time Series Analysis.
CO6	Explain Statistical representations of relevant structures and relationships.
▪ Human Resource Management and Materials Management	
CO1	Describe Human Resource Planning Process.
CO2	Elaborate Performance Appraisal, Training and Development, Wage and salary Administration.
CO3	Explain functions of material management.
CO4	Define HRM activities.
CO5	Analyse employee satisfaction, motivation, retention, and presence.
CO6	Demonstrate 5 R in purchasing and Inventory control techniques.
▪ Lab Course-V Based on CC301	
CO1	Describe Web Design Concept.
CO2	Design Web Pages using CSS, HTML & Java Script.
▪ Lab Course VI based on CC303 and AEC304	
CO1	Apply various data structures viz. Stacks, Queues, Linked Lists and Trees.
CO2	Apply Ms Excel features for Data Manipulation and Analysis.
❖ SEM-IV	
▪ RDBMS	
CO1	Describe the fundamental elements of Relational Database Management Systems.
CO2	Explain various commands in data languages with example.

CO3	Define various sub queries & joins.
CO4	Describe the basic concepts and the applications of database systems.
CO5	Explain the relational database design principles.
CO6	Apply the control statements and stored procedures.
▪ Software Engineering	
CO1	Design life cycle models, requirement elicitation techniques, understand the concept of analysis and design of software.
CO2	Develop SRS document.
CO3	Develop more general skills, such as: verbal communication, to work as part of a team.
CO4	Design tools for system development.
CO5	Explain requirement analysis of software to be developed.
CO6	Apply software engineering concepts in software development to develop quality software.
▪ DOT NET Technology	
CO1	Explain features of C# DOT NET.
CO2	Explain various server controls for website development.
CO3	Implement various server NET <i>Framework</i> and <i>ASP.NET</i> page structure.
CO4	Apply validation and state management for interactive website development.
CO5	Design and develop dynamic web application using ADO.
CO6	Design Net Entrepreneurship Development.
CO7	Define characteristics, function and types of entrepreneurs and know the role of Entrepreneurship in Economic Development.
CO8	Identify Business Opportunities and prepare business plan.
CO9	Describe project finance agencies.

CO10	Explain New Opportunities and Challenges in digital entrepreneurship.
▪ PHP	
CO1	Define environment of PHP programming Language.
CO2	Define a static website.
CO3	Explain the connecting string to any modern database.
CO4	Develop web applications using PHP.
CO5	Explain the making of PHP web servers.
CO6	Illustrate a MySQL database to create database-driven HTML forms and reports.
▪ Lab Course VII Based CC 401	
CO1	Design database for business applications.
CO2	Explain queries, sub queries, join, view and stored procedures on databases.
▪ Lab course-VIII Based on CC403	
CO1	Design console applications using C#.
CO2	Design web application using ASP.Net
▪ Mini Project	
CO1	Design fundamental domain knowledge of core courses for developing simple business applications.
CO2	Utilize the software development techniques, skills and modern tools.
CO3	Explain the difference between cost accounting and financial accounting and management accounting.
CO4	Apply different financial statement analysis tools for management decision making.
CO5	Compare the cost for make or buy product, shut down or continue business or alternative decisions by using cost volume profit analysis technique.

CO6	Draft budget to control the cost of specific to overall objects of a business organizations.
❖ BCA-III, SEM-V	
▪ E-Commerce	
CO1	Explain the functioning of E-Commerce.
CO2	Differentiate the ways of E commerce.
CO3	Illustrate customer service.
CO4	Apply the control measures while operating with E.
CO5	Explain the solution used for controlling the E.
CO6	Describe Electronic commerce focuses on the use of information.
▪ Computer Network	
CO1	Define Data Communication concept.
CO2	Apply Reference Models and transmission media.
CO3	Recognize computer networks.
CO4	Recognize essential computer network protocols.
CO5	Explain different layers like Network layer and Transport layer.
CO6	Illustrate networking protocols.
▪ RDBMS with Oracle	
CO1	Define the concept of relational Database Management System.
CO2	Write and Execute SQL Queries.
CO3	Explain the basic concepts and the applications of database systems.
CO4	Define the relational database design principles.
CO5	Write and Execute Join & Sub queries.
CO6	Explain Procedure of Block of statement.
▪ Visual Programming	
CO1	Define Architecture, Features of NET.

CO2	Explain the basic concepts of C#.
CO3	Recognize and arrange control structures.
CO4	Design a complete program using visual programming concepts.
CO5	Design web programming.
CO6	Develop ADO.Net & its Architecture.
▪ Lab Course based on 504 and 505	
CO1	Explain Architecture and Features of .NET
CO2	Develop web programming.
CO3	Explain queries by using Oracle functions & Clauses.
CO4	Define Branching and Looping Statements.
▪ Mini Project	
CO1	Design application software after understanding the problem.
CO2	Design application for application.
CO3	Design input form, output report and interface.
CO4	Draft report document.
❖ SEM-VI	
▪ Strategic Management	
CO1	Define strategic management & its process.
CO2	Explain different level of strategic.
CO3	Describe the strategic decisions that organisations make and have an ability to engage in strategic planning.
CO4	Explain strategic management process to help with formulation of organizational vision, mission and goals.
CO5	Define inter relationship between strategy formulation & Evaluation.
CO6	Define the Implementing and Executing the Tactics.

▪ Data Mining and Data Warehousing	
CO1	Explain the concept of Data mining and warehouse.
CO2	Define the concept of promotion, transfer and demotion.
CO3	Identify what kinds of technologies are used for different application.
CO4	Design implements classical models and algorithms in data warehouses.
CO5	Analyze the different data by using Clustering and its algorithm.
CO6	Design Software for Data mining and application of Data mining.
▪ Linux Operating System	
CO1	Explain Linux Operating system, kernel and basic Shell
CO2	Define the concept of File handling and directories.
CO3	Discuss various scheduling and swapping policies.
CO4	Explain operating system virtualises CPU and memory.
CO5	Apply the different types of command in vi editor.
CO6	Develop Simple shell programming Language.
▪ Java Programming	
CO1	Define the java programming related aspects.
CO2	Describe the package of data and its variables.
CO3	Design input in a Java program.
CO4	Define elementary modifications to Java programs that solve real-world problems.
CO5	Develop projects.
CO6	Draft build up applet code.
▪ Lab Course based on Paper no.- 603	
CO1	Explain the concept of Login and logout Procedure.
CO2	Define change file access permissions using chmod and confirm using ls -l command.

CO3	Apply filter commands.
CO4	Describe Shell script and its looping concept (if else, while, for, switch).
▪ Lab Course based on Paper no. 604	
CO1	Define java programs.
CO2	Explain the package of software environment.
CO3	Design projects on web technology.
CO4	Apply build up applet code.
▪ Major Project	
CO1	Design application software after understanding the problem.
CO2	Design application for application.
CO3	Design input form, output report and interface.
CO4	Draft report document.

