M.S.P.Mandal's

Vinayakrao Patil Mahavidyalaya Vaijapur

Department of Computer Science (BCS)

- **Course Outcomes**

Course Code	Course Name	Course Outcomes
CS103-T	Microprocessor-I	➢ Study Introduction to Microprocessor & Microcontroller. ➢ Understand 8086 instruction set ➢ Assess and solve basic binary math operation using the microprocessor. ➢ Apply knowledge & demonstrate programming. ➢ Design electrical circuitry to the microprocessor I/O port
CS203-T	Microprocessor-II	➢ Compare accepted standard and guidelines to select appropriate microprocessor. ➢ Analyze assembly language program. ➢ Evaluate assembly language program and download the machine code. ➢ To design memory interfacing circuits. ➢ Describe the architecture and instruction set of MUP.
CS301-T	Advance Data Structure	➢ To apply appropriate advanced data structure and efficient algorithms to approach the problems of various domain. ➢ To design the algorithms to solve the programming problems. ➢ To use effective and efficient data structures in solving various Computer Engineering domain problems. ➢ To analyze the algorithmic solutions for resource requirements and optimization ➢ To use appropriate modern tools to understand and analyze the functionalities confined to the data structure usage.
CS403-T	Basic of Networking	➢ To understand the concept of data communication. ➢ To understand fundamental concept of addressing. ➢ To gain the knowledge of common network. ➢ To understand mobile telephone system.

		➢ To understand transmission media.
CS508-T	Advance Networking	➢ Study the function of OSI layers. ➢ To understand wireless LAN ➢ Identify the different network topologies. ➢ To understand routing protocols. ➢ To understand classful and classless address.
CS608-T	Ethics & Cyber Law	➢ Introducing and understanding an importance of Cyber Security and management. ➢ Understanding cyber security rules and importance of security audit. ➢ To understand IT ACT 2000. ➢ To understand cyber crime and cyber law.
CS105-T	Communication Skill-I	➢ Students will develop knowledge, skills, and judgment around human communication that facilitate their ability to work collaboratively with others. ➢ Such skills could include communication competencies such as managing conflict, understanding small group processes, active listening, appropriate self-disclosure ➢ Students will be able to understand and apply knowledge of human communication and language processes as they occur across various contexts, e.g., interpersonal, intrapersonal, small group, organizational, media, gender, family, intercultural communication, technologically mediated communication, etc. from multiple perspectives.
CS205-T	Communication Skill-II	➢ Students will be able to understand the research methods associated with the study of human communication, and apply at least one of those approaches to the analysis and evaluation of human communication. ➢ Students will be able to find, use, and evaluate primary academic writing associated with the communication discipline. ➢ Students will develop knowledge, skills, and judgment around human communication that facilitate their ability to work collaboratively with others. Such skills could include communication competencies such as

		managing conflict, understanding small group processes, active listening, appropriate self-disclosure, etc. ➢ Students will be able to communicate effectively orally and in writing.
CS102-T	Digital Electronics	➢ Have a thorough understanding of the fundamental concepts and techniques used in digital electronics. ➢ To understand and examine the structure of various number systems and its application in digital design. ➢ Have a thorough understanding of the fundamental concepts and techniques used in digital electronics. ➢ To understand and examine the structure of various number systems and its application in digital design. ➢ The ability to understand, analyze and design various combinational and sequential circuits. ➢ Ability to identify basic requirements for a design application and propose a cost effective solution. ➢ The ability to identify and prevent various hazards and timing problems in a digital design. ➢ To develop skill to build, and troubleshoot digital circuits.
CS202-T	Operating System	➢ Demonstrate the knowledge of Systems Programming and Operating Systems ➢ Formulate the Problem and develop the solution for same. ➢ Compare and analyze the different implementation approach of system programming and operating system abstractions. ➢ Interpret various OS functions used in Linux / Ubuntu ➢ Understand and execute basic commands of shell script. ➢ Apply basic operations in shell scripts which are required for different applications. ➢ Identify and understand concept of file systems in shell script ➢ Apply concept of creating new process from parent process.

		➢ Apply concept of OS to develop code on MAC OS
CS305-T	Database Management System-I	➢ Design E0R Model for given requirements and convert the same into database tables ➢ Use database techniques such as SQL & PL/SQL ➢ Use modern database techniques such as NOSQL ➢ Explain transaction Management in relational database System ➢
CS405-T	Advance Database Management System-II	➢ 1 Design E0R Model for given requirements and convert the same into database tables ➢ Develop the ability to handle databases of varying complexities ➢ Describe different database architecture and analyses the use of appropriate architecture in real time environment. ➢ Students will be able to use advanced database
CS501-T	Software Cost Estimation	➢ To present a survey on design techniques for software system ➢ To present a design and model using UML for a given software system ➢ To present a design of test cases and implement automated testing for client server, Distributed, mobile applications
CS601-T	Software Quality and Testing	➢ Identify unique features of various software application domains and classify software applications. ➢ Choose and apply appropriate lifecycle model of software development. ➢ Describe principles of agile development, discuss the SCRUM process and distinguish agile process model from other process models. ➢ Identify user needs and formulate software specifications. ➢ Analyze software requirements by applying various modeling techniques. ➢ Translate the requirements model into the design model ➢ Describe and demonstrate use of software and user-interface design principles. ➢ Explain the cleanroom design method.

		➢ List and classify CASE tools and discuss recent trends and research in software engineering.
CS106-T	Math Foundation	➢ Develop mathematical curiosity and use inductive and deductive reasoning when solving problems. ➢ Confident in using mathematics to analyze and solve problems ➢ Develop the knowledge, skills and attitudes ➢ understand and be able to use the language, symbols and notation of mathematics ➢ Enjoy mathematics and develop patience and persistence when solving problems ➢ Develop abstract, logical and critical thinking and the ability to reflect critically upon their work and the work of others.
CS206-T	Numerical Computation Method	➢ Recognize that mathematics permeates the world around us ➢ Develop a critical appreciation of the use of information and communication technology in mathematics ➢ They are often easy to use. They can produce results quickly. ➢ Apply numerical methods to obtain approximate solutions to mathematical problems. ➢ Analyze and evaluate the accuracy of common numerical methods. ➢ Derive numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration, the solution of linear and nonlinear equations, and the solution of differential equations.
CS306-T	Statistical Method	➢ Students will formulate complete, concise, and correct mathematical proofs. ➢ Organizing and summarizing the data. Analyzing the data and drawing conclusions from it. ➢ Apply laws of probability to concrete problems, ➢ Use mathematical tools, including calculus

		and linear algebra, to study probability and mathematical statistics and in the description and development of statistical procedures ➢ Communicate concepts in probability and statistics using both technical and non-technical language. ➢ They are often easy to use. They can produce results quickly.
CS401-T	Software Engineering	➢ Basic knowledge and understanding of the analysis and design of complex systems. ➢ Ability to apply software engineering principles and techniques. ➢ To provide the idea of decomposing the given problem into Analysis, Design,. Implementation, Testing and Maintenance phases. ➢ Develop methods and procedures for software development that can scale up for large systems and that can be used consistently to produce high-quality software at low cost and with a small cycle of time. ➢ To apply principles of software development and evolution.
CS504-T	Computer Graphics	➢ Explain the core concepts of computer graphics, including viewing, projection, perspective, modeling and transformation in two and three dimensions. ➢ Apply the concepts of color models, lighting and shading models, textures, ray tracing, hidden surface elimination, anti-aliasing, and rendering. ➢ Understand the basics of computer graphics, different graphics systems and applications of computer graphics. ➢ Discuss various algorithms for scan conversion and filling of basic objects and their comparative analysis.
CS505-T	PHP	➢ Write PHP Scripts To Handle HTML Forms ➢ Write Regular Expressions Including Modifiers, Operators, And Metacharacters. ➢ Create PHP Programs That Use Various PHP

		Library Functions, And That Manipulate Files And Directories. ➢ Introduce The Creation Of Static Webpage Using HTML ➢ Describe Fundamentals Of Web
CS604-T	Adv. Computer Graphics	➢ Use of geometric transformations on graphics objects and their application in composite form. ➢ Extract scene with different clipping methods and its transformation to graphics display device. ➢ Explore projections and visible surface detection techniques for display of 3D scene on 2D screen. ➢ Render projected objects to naturalize the scene in 2D view and use of illumination models for this. ➢ Understand the basic concepts of computer graphics. ➢ Design scan conversion problems using C++
CS605-T	Adv. PHP	➢ To provide the necessary knowledge to design and develop dynamic, database-driven web applications using PHP ➢ Introduction to PHP, embedding of PHP into HTML program, Data Types, Variable, Operators, Decision Making, Functions and Array in PHP , String Handling, Echo function, conditional tag (If Else), Loop etc. ➢ Discussion on Data Base Concepts using PHP –MySQL and basic CRUD operation, Data backup recovery, query optimization and basics of data base administration.
CS101-T	Computer Fundamentals	➢ The students are able to understand basic components in computers. ➢ Understand basic system software and its applications software. ➢ Understand basic computer hardware and network system. ➢ Understand basic network protocols
CS201-T	Data Structure	➢ Describe how arrays, records, linked structures, stacks, queues, trees, and graphs are represented in memory and used by

		algorithms ➢ Describe common applications for arrays, records, linked structures, stacks, queues, trees, and graphs. ➢ Write programs that use arrays, records, linked structures, stacks, queues, trees, and graphs. ➢ Demonstrate different methods for traversing trees. ➢ Compare alternative implementations of data structures with respect to performance ➢ Describe the concept of recursion, give examples of its use, describe how it can be implemented using a stack ➢ Design and implement an appropriate hashing function for an application.
CS303-T	PC Maintenance	➢ Fundamentals of Hardware, handling, testing and troubleshooting of personal computer problems ➢ Diagnose & repair problems of Desktop/Laptop/Mobiles ➢ Repair Laptops, Tablets, Identify the Faults & Troubleshoot, Establish Secured Wireless Network ➢ Introduction of OS, File System, Memory Management, System Backup & Restore, Viruses and Anti Viruses. Knowledge of inbuilt Diagnostic Tools ➢ Identify existing configuration of the computer and peripherals and to troubleshoot common problems
CS304-T	Programming in CPP	➢ To learn the fundamental programming concepts and methodologies which are essential to building good C/C++ programs. ➢ Understanding basic concepts of object oriented programming. ➢ Able to use various control structures to improve programming logic. ➢ Designing classes and objects. ➢ Able to use constructor and destructor. ➢ Utilize the OOP techniques like operator overloading, inheritance, and polymorphism
CS402-T	Fedora	➢ To understand Linux based operating System Fedora. ➢ To understand Basic & Advance commands of Linux

		➢ Software installation & Deletion in Fedora os ➢ Understanding of Fedora GUI Environment
CS404-T	Core Java	➢ Understand Object oriented programming concepts using Java ➢ Getting Knowledge of input, its processing and getting suitable output ➢ Understand, design, implement and evaluate classes and applets. ➢ Understand concept of Multiprogramming and Exception Handling
CS503-T	Core Java-II	➢ He will be able to develop distributed business applications, develop web pages using advanced server-side programming through servlets and Java server pages. ➢ Demonstrate approaches for performance and effective coding. ➢ To learn database programming using Java. ➢ To study web development concept using Servlet and JSP.
CS603-T	Theory Of Computation	➢ To understand the concept of machines: finite automata, pushdown automata, linear bounded automata, and Turing machines. ➢ To understand the formal languages and grammars: regular grammar and regular languages, context-free languages and context-free grammar; and introduction to context-sensitive language and context-free grammar, and unrestricted grammar and languages. ➢ To understand the relation between these formal languages, grammars, and machines. ➢ To understand the complexity or difficulty level of problems when solved using machines
CS104T	C Programming – I	➢ Create algorithms to solve simple programming problems. ➢ Describe and employ strategies that are useful in debugging. ➢ Design, implement, test and debug programs that use calculations and selections. ➢ Design, implement, test and debug programs that use loops and arrays.
CS204T	C Programming - II	➢ Design, implement, test and debug

		programs that use arrays for character strings and that use pointers for character strings. ➢ Analyze programming problems to choose when regular loops should be used and when recursion will produce a better program. ➢ Design, implement, test and debug programs that use different data types, such as simple variables, arrays, and structures.
CS302T	UNIX Operating System	➢ Choose appropriate UNIX/Linux operating system commands to make effective use of the environment to solve problems ➢ Write efficient, effective scripts with documentation. ➢ Run C / C++ programs on UNIX. ➢ do shell programming on UNIX OS ➢ Understand and handle UNIX system calls.
CS406T	Web Fundamental	➢ Understand the internet related concepts that are vital in understanding web development. ➢ Understand the important HTML tags for designing static pages and separate design from content using Cascading Style sheet. ➢ Design and develop web pages using CSS styles, internal and/or external style sheets. ➢ Develop interactive web applications through coding using HTML, CSS and XML.
CS502T	Basic of Android OS	➢ Install and configure Android application development tools. ➢ Design and develop user Interfaces for the Android platform. ➢ Save state information across important operating system events. ➢ Apply Java programming concepts to Android application development.