

DEPARTMENT OF COMPUTER APPLICATIONS AND TECHNOLOGY
M.Sc. COMPUTER SCIENCE AND TECHNOLOGY

PROGRAMME OUTCOMES FOR CST

After the completion of programme the students are able to

- P01. Relate complex computing problems using computer science fundamentals and application domains.**
- P02. Recalls the principles of domain knowledge for computing models.**
- P03. Choose modern computing tools, skills, and techniques necessary for innovative software solutions.**
- P04. Substitute complex business scenarios and contemporary issues in emerging technologies.**
- P05. Design projects with programming in multidisciplinary domains.**
- P06. Enumerate the creative notion with the emerging technologies in real time applications.**

PROGRAMME SPECIFIC OUTCOMES (PSO) FOR CST

After the completion of programme the students are able to

- PSO1. Relate creative ideas to transform software programs for the advanced technologies.**
- PSO2. Interpret applications for embryonic real time environment.**
- PSO3. Define solutions for emerging challenges in the computation domain.**

COURSE OUTCOMES FUNDAMENTALS OF DIGITAL COMPUTERS (CTC1A)

The completion of the course makes the students to

- CO1: Implement the binary, hexadecimal, octal and decimal number systems and conversions.
- CO2: Describe the logic circuits and Boolean algebra, SOP and POS using K-Maps.
- CO3: Analyze the fundamental concepts of Sequential circuits of various Flip-flops, Counters and registers.
- CO4: Design the Combinational logic from basic gates.
- CO5: Enumerate the concepts of ALU and PLA.
- CO6: Construct a logic circuit using gates, Registers, Flip Flops.

NON MAJOR ELECTIVE- HTML (CTD1C)

The completion of the course makes the students to

- CO1: Write simple programs with HTML tags.
- CO2: Implement various tags related to paragraph in web page.
- CO3: Discuss the concept of list and its types in WebPages
- CO4: Explore the emerging technologies with HTML by linking tables with existing data.
- CO5: Demonstrate the generation of frames and tables in the webpage.
- CO6: Design simple WebPages.

INTERNET AND ITS APPLICATIONS (CTC3B)

The completion of the course makes the students to

- CO1: Demonstrate about the ISP, Internet services and types of various internet accounts.
- CO2: Discuss the concepts of ISDN,ADSL and Intranet.
- CO3: Enumerate the Outlook Express, E-Mail tasks, Signatures and stationery in E-mail.
- CO4: Implement Voice, Video conferencing, online chat, direct chat system,MUDs, MOOs, MUSHes, Microsoft chat and IRC.
- CO5: Associate the principles of web browser and Web applications.
- CO6: Construct their own web pages by using various technologies.

MICROPROCESSORS (CTC3C)

The completion of the course makes the students to

CO1: Identify the basic concepts of microprocessor architecture and its operations.

CO2: Write the simple assembly language program.

CO3: Associate the principles of time delay and counters.

CO4: Recognize the basic conversions and arithmetic operations.

CO5: Implement the various Interrupts and I/O interfaces in programs.

CO6: Illustrate the processing of Microprocessor.

PROGRAMMING IN C (CTC3D)

The completion of the course makes the students to

CO1: Analyze the Data types, variables, constants, identifiers in C program.

CO2: Demonstrate the computer programming language concepts.

CO3: Implement the concept of functions in program.

CO4: Describe the Structures, union and enumeration user defined data types.

CO5: Interpret the concept of pointers, Files and its operations.

CO6: Reproduce the data processing applications in C programs.

COMPUTER GRAPHICS (CTC4C)

The completion of the course makes the students to

CO1: Describe the video display types and various input and output devices.

CO2: Recognize various algorithms for Line, Circle, Ellipse, and Area filling drawings.

CO3: Apply the concepts of 2D transformation, viewing techniques and clipping methods.

CO4: Demonstrate the 3D transformation and parallel and perspective projections.

CO5: Explore the projections and visible surface detection techniques.

CO6: Associate the different graphic display methods and devices.

DATA STRUCTURES (CTC4B)

The completion of the course makes the students to

- CO1: Classify the data represented in memory.
- CO2: Enumerate the common applications of storage structure.
- CO3: Illustrate programs with various storage structures.
- CO4: Implement various traversing methods in tree structure.
- CO5: Identify the dynamic and static data structures.
- CO6: Demonstrate the concepts of Data Structures.

PROGRAMMING IN C++ (CTC4D)

The completion of the course makes the students to

- CO1: Compare the Object Oriented Programming Concepts in C++.
- CO2: Demonstrate the syntax rules for identifiers, keywords, constants and variables.
- CO3: Summarize the lifetime rules for variables and functions in program.
- CO4: Implement the Array concepts in C++.
- CO5: Interpret the rules for function overloading and operator overloading.
- CO6: Develop own programs in C++.

SOFTWARE ENGINEERING (CTC4A)

The completion of the course makes the students to

- CO1: Prioritize the engineering design to produce solutions.
- CO2: Associate the planning and scheduling techniques.
- CO3: Compare the various methodologies for developing the applications.
- CO4: Identify the ethical principles in the application of computing-based solutions.
- CO5: Enumerate the skills to support a professional pathway and various testing strategies.
- CO6: Develop applications with software techniques.

COMPUTER NETWORKS (CTC5D)

The completion of the course makes the students to

- CO1: Identify the layers of the OSI model and TCP/IP.
- CO2: Discover the different types of network topologies and protocols.
- CO3: Recognize the routing algorithms and their functions.
- CO4: Generalize the elementary data link and sliding window protocol.
- CO5: Differentiate the principles of TCP & UDP.
- CO6: Demonstrate the working process of the cryptography techniques.

DATABASE MANAGEMENT SYSTEMS (CTC5A)

The completion of the course makes the students to

- CO1: Analyze the database concepts, Data types, Normal forms and normalized tables.
- CO2: Construct the query.
- CO3: Design the forms and reports with error handling techniques.
- CO4: Identify the user interface and the transaction methods.
- CO5: Associate the concept of database administration with application development.
- CO6: Design normalized tables in database.

OPERATING SYSTEMS (CTC5B)

The completion of the course makes the students to

- CO1: Interpret the principles of a computer operating system
- CO2: Demonstrate the policies for scheduling, deadlocks, synchronization and system calls.
- CO3: Extrapolate interactions among the various components of computing systems.
- CO4: Implement Memory management techniques with OS components
- CO5: Examine the OS performances.
- CO6: Relate the working system of UNIX and Windows operating system

VISUAL PROGRAMMING (CTC5C)

The completion of the course makes the students to

CO1: Describe the fundamental skills of the visual environment.

CO2: Develop a simple Application.

CO3: Implement the List, Arrays, and combo boxes in multiple forms.

CO4: Demonstrate the connectivity between VB and MS-ACCESS / ORACLE database.

CO5: Classify the Mouse monitoring activity, File System Controls and Objects

CO6: Compare the methods and techniques in real time application projects.

COMPUTER ARCHITECTURE (CTC6C)

The completion of the course makes the students to

CO1: Demonstrate the architecture and functionalities of system program control.

CO2: Implement the concepts of various pipelining.

CO3: Construct addition, subtraction, multiplication, division and floating point algorithms

CO4: Recognize I/O operations, peripheral devices, modes of transfer and priority interrupts.

CO5: Classify the memory organization and its types.

CO6: Identify the basic components of a computer system.

JAVA PROGRAMMING (CTC6B)

The completion of the course makes the students to

CO1: Classify the basic components of Java programming.

CO2: Write simple object-oriented Java programs.

CO3: Design the applications with threads in Java.

CO4: Describe the methods to read and write files in Java.

CO5: Manipulate own programs by using java applications.

CO6: Demonstrate the elementary modifications to Java programs that solve real-world problems.

OBJECT ORIENTED ANALYSIS AND DESIGN (CTC6D)

The completion of the course makes the students to

- CO1: Describe the object oriented life cycle models and its methodologies.
- CO2: Implement the use case models with case studies.
- CO3: Differentiate the designing processes, object Interoperability with case studies.
- CO4: Discuss the user Interface design, view layer classes along with micro and macro level processes can be recognized.
- CO5: Apply the testing strategies in developed applications.
- CO6: Associate the object-oriented approach in designing systems.

MULTIMEDIA SYSTEM (CTC6A)

The completion of the course makes the students to

- CO1: Categorize the different hardware components in multimedia system
- CO2: Discover the basic and authoring tools in multimedia systems.
- CO3: Enumerate the multimedia building blocks.
- CO4: Illustrate the concepts in multimedia using the internet.
- CO5: Develop a project in multimedia software development tools.
- CO6: Associate the multimedia technology in various applications.

ADVANCED JAVA PROGRAMMING (CTC7A)

The completion of the course makes the students to

- CO1: Implement Server-Side Programming using Servlets.
- CO2: Recognize software components using JAVA Beans.
- CO3: Associate the multi-tier architecture of web-based enterprise applications.
- CO4: Develop the applications using EJB Components
- CO5: Implement the web based application using Perl Programming
- CO6: Compile web based programs.

DESIGN AND ANALYSIS OF ALGORITHMS (CTC7B)

The completion of the course makes the students to

- CO1: Identify the various types of algorithms and asymptotic calculations.
- CO2: Classify the divide-and-conquer method.
- CO3: Differentiate the divide-and-conquer method with greedy algorithm.
- CO4: Evaluate the dynamic-programming problems.
- CO5: Implement Backtracking concept with problem solving techniques.
- CO6: Categorize the Lower Bound theory concept with Comparison of trees, NP HARD and NP Complete problem.

SYSTEMS SOFTWARE (CTV7C)

The completion of the course makes the students to

- CO1: Differentiate the Operating Systems and Application Systems software.
- CO2: Discover the function of Assemblers and Macro processors.
- CO3: Demonstrate the process of compilers, programming languages, scanning and parsing.
- CO4: Classify the concept of loaders and linkage editors.
- CO5: Associate the concept of software tools in programming environment.
- CO6: Interpret the use of linkage editor for the IBM PC.

WEB TECHNOLOGY (CTC7C)

The completion of the course makes the students to

- CO1: Demonstrate the basics of JavaScript- arrays, variables, operators and functions
- CO2: Develop event-driven programs with HTML intrinsic event attributes,
- CO3: Implement string manipulation, events and exception handling in C#.
- CO4: Formulate the page structure of ASP.Net with various controls

CO5: Construct object models, request and response object, authentication with SSL.

CO6: Develop the WebPages and navigator objects.

DISTRIBUTED DATABASES (CTC8B)

The completion of the course makes the students to

CO1: Relate the concepts of distributed and centralized databases.

CO2: Identify queries and query optimization

CO3: Interpret the distributed concurrency control, deadlock and administration.

CO4: Characterize and discriminate the distributed object database management.

CO5: Classify the parallel database system and its architecture.

CO6: Implement various distributed concepts in database.

E-COMMERCE (CTC8C)

The completion of the course makes the students to

CO1: Relate the concept of electronic commerce, Systems software and Application software.

CO2: Analyze the risk management in electronic commerce and business transaction.

CO3: Summarize the concept of online business management and security for electronic commerce.

CO4: Explain about the security involves in networking process of Tcp/Ip protocols.

CO5: Demonstrate the principles of electronic payment and transaction systems.

CO6: Correlate the benefits of electronic business.

INFORMATION SECURITY (CTC8D)

The completion of the course makes the students to

CO1: Describe the basics of computer security, various Attacks, Threats in the system.

CO2: Examine Operating System Security and File Protection Mechanism.

CO3: Determine Database Security.

CO4: Demonstrate the various network security Controls.

CO5: Interpret the Administrating Security with Case studies of ethics.

CO6: Articulate the designing methods to protect computers and digital information.

UNIX AND SHELL PROGRAMMING (CTC8A)

The completion of the course makes the students to

CO1: Demonstrate the UNIX file system.

CO2: Formulate the arguments and parameters for shell program

CO3: Classify the command-line syntax and run time commands.

CO4: Interpret commands in scripting language.

CO5: Analyze the methods for program development.

CO6: Develop Unix program by using the applications.

SOFTWARE PROJECT MANAGEMENT (CTV8A)

The completion of the course makes the students to

CO1: Analyze the Project Management principles for software development.

CO2: Describe concepts of process models.

CO3: Analyze the risk involves in software projects, able to monitor and control the risk.

CO4: Identify the type of contract and organizing teams for developing projects and quality measures.

CO5: Develop the real time applications by using PRINCE 2 and euro methods.

CO6: Design the software system.

DATA WAREHOUSING AND DATA MINING (CTC9C)

The completion of the course makes the students to

CO1: Demonstrate the concepts of database technology and applications of data mining.

CO2: Illustrate the pre-processing statistical methods for data mining algorithms.

CO3: Differentiate the association of patterns.

- CO4: Characterize the data summarization forms and data mining functionalities.
- CO5: Identify the various data mining algorithms and methods.
- CO6: Analyze the data patterns based on the various data mining tools

IMAGE PROCESSING (CTV9G)

The completion of the course makes the students to

- CO1: Illustrates the color transformation, Image acquisition fundamentals.
- CO2: Analyze the histogram processing and Gray level transformations
- CO3: Identifies 2D Fourier transform, 2-D DFT and concept of filtering.
- CO4: Discover the knowledge about image restoration.
- CO5: Demonstrate the Image compression concept.
- CO6: Implement the concept of DIP in real time systems.

NETWORK PROGRAMMING (CTC9A)

The completion of the course makes the students to

- CO1: Analyze the concept of Active-X script in stand-alone script.
- CO2: Create ActiveX Document with other documents.
- CO3: Relate the URL Monikers with ISAPI.
- CO4: Design the IIS Applications with DHTML.
- CO5: Identify the dynamic Linking Library for code launching and Migration wizard.
- CO6: Link the various Documents with the Scripting languages.

SOFTWARE TESTING (CTC9B)

The completion of the course makes the students to

- CO1: Implement the software testing technique for bug free product.
- CO2: Discover the proper testing path technique.
- CO3: Describe the various techniques in domain testing.
- CO4: Interpret the various techniques in syntax testing.

CO5: Analyze the automation concepts and software testing tools.

CO6: Construct the software models and testing tools.

TCP/IP NETWORKS (CTV9A)

The completion of the course makes the students to

CO1: Describe the structure of the abstract layered protocol model.

CO2: Analyze the basic computer network technology.

CO3: Examine the different types of network topologies and protocols.

CO4: Enumerate the layers of the OSI and TCP/IP model.

CO5: Compare the transport layer and its function.

CO6: Identify the different layers of network devices.