BSC- Program Specific outcomes listed as follows:-

PSO1:- To apply knowledge of computing fundamentals, computing specialization and domain knowledge for the

abstraction and conceptualization of computing models from defined problems and requirements.

PSO2:- To have the ability to understand and analyze a given real-world problem and propose feasible computing solutions.

Also analyze customer requirements, create high level design, implement and document robust and reliable software systems.

PSO3:- To transform complex business scenarios and contemporary issues into problems, investigate, understand and

propose integrated solutions using emerging technologies.

PSO4:- To use the latest technologies like IoT, AI, Machine Learning, Big Data Analytics, Cyber Security and modern

hardware and software tools necessary for innovative software solutions and to possess leadership and managerial skills with best professional ethical practices and social concern.

BSC- Program Outcomes listed as follows:-

PO1:- To master fundamental project management skills, concepts and techniques, set attainable objectives and ensure

positive results, meeting scope, time and budget constraints

PO2:- To recognize the need for self-motivation to engage in lifelong learning, the social, professional, cultural and ethical

issues involved in the use of computer technology and give them due consideration in developing software systems.

PO3:- To assess the need for innovation and initiate the process through entrepreneurship or otherwise and to

work collaboratively as a member or leader in multidisciplinary teams.

PO4:- To select their career after acquiring necessary eligibility requirement and the skill

COURSE OBJECTIVES & COURSE OUT COMES

S. No.	COURSE OBJECTIVES	COURSE OUTCOMES
	BSC- First Year	
1.	**Paper:- Computer Fundamentals and MS Office**	
	1. To become familiar with OS concepts andcomputing fundamentals. 2. To enhance working abilities using Internet, graphic design, and productivity technologies. 3. To learn the fundamentals of programming. 4. To use computation to solve problems. 5. To learn the basics of MS Word.	After the completion of the course, students will be able to 1. Recognize the fundamentals of computers and the purpose of operating systems. 2. Learn about the Internet, computer networks, and the social effects of IT. 3. Learn about Word, Excel, and Power-Point, three PC software programmers. 4. Create a flowchart and an algorithm for straightforward tasks. 5. Create Chart applications utilizing all features of Word.

2.	**Paper: Computer Architecture**	
	1. Apply the principles of number system, binarycodes and Boolean algebra to minimize logic expressions. 2. Develop K-maps to minimize and optimizelogic functions up to 5 variables 3. Acquire knowledge about various logic gates and logic families and analyze basic circuits ofthese families 4. Explain the organization of basic computer ,its design and the design of control unit. 5. Demonstrate the working of central processingunit and RISC and CISC Architecture. 6. Describe the operations and language f the register transfer, micro operations and input-output organization.	After the completion of the course, students will be able to 1. Implement digital functions in the forma digital logic and perform binary arithmetic operations 2. Identify and implement commonly used sequential and combinational circuits 3. Basic computer design and developing 8086/8088 A/L programs for small applications 4. Implement CPU design and Input /Output organization 5. Understand advanced computer architectural aspects and parallel designs

3	**Paper: Programming in C**	
	1. To provide the knowledge of basic data structures and their implementations. 2. To understand importance of data structures in context of writing efficient programs.	After the completion of the course, students will be able to 1. To learn about analyzing and designing algorithms to solve a problem and learn to find the asymptotic efficiency of an algorithm. 2. To study about binary tree and its applications. 3. To learn advanced data structures such as balanced search trees and heap hash operations. 4. To learn about graphs & its algorithms such as 5. To study various graph processing algorithms and Algorithm Design techniques.

4	**Paper: Structure System Analysis and Design**	
	1. To provide the knowledge of basic System structures and their Elements. 2. To understand importance of DFD, Data Flow Diagram .	After the completion of the course, students will be able to 6. System Design, Logical and Physical system design 7. Identify and implement commonly used structured Walkthrough 8. Basic computer form design classification of form design 9. Know about Fact finding in system analysis.
	Second Year:	
1.	**Paper: Data Communication and Networking**	

	1. Students will able to understand the concept of Computer networks and data communication. 2. Students will understand the network models: OSI &TCP/IP and their layer. Students will have good understanding of distributed system. 3. This course will help student to understand replication management, fault tolerance and security in Distributed system.	After the completion of the course, studentswill be able to 1. Understand basic concepts data communication and computer networks. 2. Gain understanding about OSI model andTCP/IP. 3. Develop understanding about working ofdifferent layers of TCP/IP and OSI model. 4. Understand about concept DistributedSystems and Synchronization. 5. Learn about replication management, fault tolerance and security in DistributedSystems.

2.	**Paper: Object -Oriented design and C++**	
	1. To provide the knowledge of basic data structures and their implementations. 2. To understand importance of data structures in context of writing efficient programs.	After the completion of the course, students will be able to 1. To learn about analyzing and designing algorithms to solve a problem and learn to find the asymptotic efficiency of an algorithm. 2. To study about binary tree and its applications. 3. To learn advanced data structures such as balanced search trees and heap hash operations. 4. To learn about graphs & its algorithms such as 5. To study various graph processing algorithms and Algorithm Design techniques.
3	**Paper:- Data Structure with C++**	
	1. Students will be familiar with the concept of C++, its features, classes, objects etc. 2. Students will understand the concept of Data Structure. 3. Students will be well known to algorithms and its complexity. 4. Students will be familiar to Classification of data structure in detail like primitive, non primitive data structure, stacks, queues, trees, graphs, linked list.	After the completion of the course, students will be able to 1. Understand concept of object oriented programming and its features. 2. Gain insights about C++ features and access specifiers. 3. Able to understand importance of polymorphism and inheritance. 4. Learn to analyze algorithms on basis of their performance. 5. Ability to use stack, queue and 6. linked list data structures.
4	**Paper: Operating System**	

	1. To provide introduction to UNIX Operating System and its File System 2. To gain an understanding of important aspects related to the SHELL and the process 3. To develop the ability to formulate regular expressions and use them for pattern matching. 4. To provide a comprehensive introduction to SHELL programming, services and utilities	After the completion of the course, students will be able to 1. Understand basic concepts of Operating Systems and their structure. 2. Learn about concept of processes and process scheduling. 3. Understand about interprocess communication and role of semaphores. 4. Learn in detail about Deadlock, memory management and I/O management. 5. Understand Linux basics and Shell programming.
	Third Year	
1.	**Paper: Database Management System**	
	1. Introduction to computer programming using 2. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. 3. Includes language syntax, data and file structures, input/output devices, and files. Understand the basic concepts and the applications of database systems. 4. Master the basics of SQL and construct queries using SQL. 5. Understand the relational database design principles. 6. Familiar with the basic issues of transaction processing and concurrency control	After the completion of the course, students will be able to 1. Understand model, components of computer and how it works. 2. Understand the concept of input and output devices of Computers in detail. 3. Understand RAM, ROM and their types in detail. 4. Understand the concepts, structure, types and design of operating Systems 5. Demonstrate the basic elements of a relational database management system. 6. Identify the data models for relevant problems. 7. Design entity relationship and convert entity relationship diagrams into RDBMS

		and formulate SQL queries onthe respect data into RDBMS and formulate SQL queries on the data
2.	**Paper: Introduction to Internet and web Technologies**	

	1. To understand the concepts of Hypertext Markup Language and Cascading Style Sheets. 2. To learn JavaScript for creating dynamic websites. 3. To learn the operations perform on data among web applications using XML 4. To acquire knowledge on creation of software components using XML. 5. To learn Server-Side Programming using Servlets and Java Server Pages. 6. To learn the creation of pure DynamicWeb Application using JDBC.	After the completion of the course, students will be able to 1. Explain the use of DHTML and XML in data exchange. 2. Analyze and use various AWT controls and event handling for development of a Applet. 3. Use of Swing components for the web application development. 4. Develop applications using Servlets, parameter passing and concept of session maintenance. 5. Design and develop basic JSP applications.

3.	**Paper: Visual Basics Programming**	
	1. Introduction to computer programming using VB 2. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. 3. Includes language syntax, data and file structures, input/output devices, and files. Understand the basic concepts and the applications of database systems. 4. Master the basics of VB decision and condition. 5. Familiar with the basic issues of Message box, Input box	After the completion of the course, students will be able to 1. Understand model, components of computer and how it works. 2. Understand the concept of input and output devices of Computers in detail. 3. Understand the Database programming using DAO & ADO. 4. Demonstrate the basic elements of a function returning custom data types. 5. Identify the multi-dimensional array Static & dynamic array.
4	**Paper: Software Engineering**	

	1. Introduction to Software Processes 2. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. 3. Basics of Models in Software Engineering. 4. Understand the Organization of SRS. 5. Basics Goal of Data Dictionary.	After the completion of the course, students will be able to 1. Recognize the fundamentals of computers and the purpose of Software Engineering. 2. Learn about the Waterfall model spiral model. 3. Learn about Software project management. 4. Create a flowchart and E-R Diagram 5. Understand the concept of risk management.