Subject Name	Description
Data Structures	To learn and understand the systematic way of solving problems and the different methods of organizing large amounts of data. It introduce the practical and formal aspects of data structures. It teach methodologies useful for the implementation and empirical evaluation of sorting and searching algorithms and to efficiently implement the solutions for specific problems using data structures.
Discrete Structures	To familiarize the students with the concepts of propositional calculus and predicate calculus, Set theory, Lattice, Graph and graph theory.
Operating Systems	It aims to introduce the students with the Operating System concepts, Process Concept. Students can evaluate different Protection and Security mechanisms for operating systems. Students can design and implement CPU Scheduling algorithms, Page replacement algorithms, Memory Allocation algorithms and Disk Scheduling algorithms.
Analog and Digital Communication	To familiarize students with the fundamentals of analog and digital communication systems .To provide students with tools for communication signal analysis. various techniques for amplitude modulation and demodulation of analog signals , techniques for generating and demodulating narrow-band and wide-band frequency and phase modulated signals.
Switching Theory and Digital Design	To study the basic philosophy underlying the various number systems, negative number representation, binary arithmetic, binary codes and error detecting and correcting binary codes. Theory of Boolean algebra and to study representation of switching functions using Boolean expressions and their minimization techniques. The combinational logic design of various logic and switching devices and their realization. Sequential logic circuits design both in synchronous and Asynchronous modes for various complex logic and switching devices, their minimization techniques and their realizations.
Statistical Modeling and Queuing Theory	To impart knowledge in Statistical methods and Queuing theory and their applications in Engineering and Technology To gain the knowledge of Statistical methods and its applications in order to apply them for solving real world problems. To introduce the techniques of developing discrete & continuous probability distributions and its applications. To understand the concept of probability, random variables and their applications in engineering
Computer Architecture	Explain the organization of basic computer, its design and the design of control unit. Describe the operations and language of the register transfer, micro operations and input/output organization .Understand the organization of memory and memory management hardware .Elaborate advanced concepts of computer architecture ,Parallel Processing, interprocessor communication and synchronization.
Computer Networks	To understand the fundamental concepts of computer networking. To familiarize the student with the basic taxonomy and terminology of the computer networking area. To introduce the student to advanced networking concepts, preparing the student for entry Advanced courses in computer networking .To allow the student to gain expertise in some specific areas of networking such as the design and maintenance of individual networks.
Object Oriented Programming & Design	To get a clear understanding of object oriented concepts. Understand object oriented programming through C++. To demonstrate adeptness of object oriented programming in developing solutions to problems demonstrating usage of data abstraction, encapsulation, and inheritance.To develop the problem solving skills by applying object oriented concepts of the language C++.
Database Management	To provide a strong formal foundation in database concepts, technology and practice to the participants to groom them into well-informed database application developers.To

Systems	distinguish between file processing system and DBMS. To describe DBMS its advantages, disadvantages, users, architectures and data languages.To describe data models, schemas and instances. Introduction to the concepts of transactions and transaction processing. Design and build database system for a given real world problem.