2.6.1 COURSE OUTCOME

Response:

The college has clearly stated all program outcomes, program specific outcomes and course outcomes for all programs. The faculty, industry and alumni are actively involved in preparing program outcomes, program specific outcomes and course outcomes of all programs in the college. The course outcomes of all the programs are made known to the students and staff by displaying in the website of the college. Individual copies of the regulation book are distributed to all the students which contain details of the course outcomes. Regulation books are also available in the library for student access. Orientation program for all the new students is conducted every year at the beginning of the academic year to educate about all course outcomes. At the beginning of the academic year all the faculty members will prepare the course files and laboratory manuals. The course file contains Department vision, mission, course syllabus, individual time table, program objectives, program outcomes, various mapping matrices, unit plan, lesson plan, course plan, unitwise material, direct and indirect assessments, student grading sheet, surveys/feedbacks collected from students and CO-PO attainment sheet. Each faculty take responsibility as a mentor, counselor, facilitator, guide, assessor, evaluator, learner, and finally as a teacher in system. The college collects the feedback from the students on course structure, infrastructure, faculty, information resources, evaluation, and on the overall OBE system, to establish quality and continuously improve the program.

Sr. No.	Subject Name	Objectives
1	C Programming with Data Structure (IT-12)	**At the end of this course, each student should be able to:** CO1. Choose appropriate data structures to represent data items in real world problems. CO2. Analyze the time and space complexities of algorithms CO3. Design programs using a variety of data structures such as stacks, queues, hash tables, binary trees, search trees, heaps, graphs, and B-trees. CO4.Analyze and implement various kinds of searching and sorting techniques.
2	Software Engineering (IT13)	**At the end of this course, each student should be able to:** CO1.Adapt the basic software engineering methods and practices in their appropriate applications CO2. Distinguish the various software process models such as waterfall model, evolutionary models, etc. CO3. Compose the requirements document by understanding the software requirements CO4. Relate the software architectural styles to the suitable applications. CO5. Determine the need for, and an ability to engage in, life-long learning. CO6. Analyze, design and maintain software

		systems
3	Database Management System (IT14)	**At the end of this course, each student should be able to:** CO1. Demonstrate the basic elements of a relational database management system. CO2. Identify data models for relevant problems. CO3. Design entity relationship and convert entity relationship diagrams into RDBMS and formulate SQL queries on the respect data. CO4. Apply normalization for the development of application software's. CO5. Design and implement a full real size database system
4	Business Process Domains (BM12)	**At the end of this course, each student should be able to** CO1. To learn & understand the processes and practices in business and their applications CO2. To introduce advance business applications like CRM and SCM. CO3. To learn the financial aspect of business and management CO4. To learn and analyze the financial statements of a business
5	C & DS LAB (IT-12L)	**At the end of this course, each student should be able to**: CO1. Identify the appropriate data structures and algorithms for solving real world problems. CO2. Implement various kinds of searching and sorting techniques CO3. Implement data structures such as stacks, queues, Search trees, and hash tables to solve various computing problems
6	DBMS Lab (T14L)	**At the end of this course, each student should be able** **to:** CO1.Design and implement a database schema for given problem. CO2. Capable to design and build a GUI application. CO3. Apply the normalization techniques for development of application software to realistic problems. CO4. Formulate queries using SQL DML/DDL/DCL commands.
7	Soft Skill – Word Power (SS11)	**At the end of this course, each student should be able to** To improve the vocabulary of English and competency for business English. Use of language lab / English learning tools such as mobile apps like Sling etc. are also encouraged and lot of listening practice, reading and understanding exposure should

		be given to the students. Interested students may appear for Cambridge English exam after completion of 1st year.
8	Essentials of Operating system (IT21)	**At the end of this course, each student should be able to**: CO1. Learn the basic concepts of operating systems. and about process management CO2. Apply different optimization techniques for the improvement of system performance CO3. Learn and apply different memory management techniques CO4. Discuss various protection and security aspects. CO5. Apply different deadlock prevention techniques
9	Web Technologies (IT22)	**At the end of this course, each student should be able to:** CO1. Gain knowledge of client side scripting, validation of forms and AJAX programming. CO2. Have understanding of server side scripting with PHP language. CO3. Have understanding of what is XML and how to parse and use XML Data with Java. CO4. Create applications by using the concepts like JSP and Servlet
10	Core Java (IT23)	**At the end of this course, each student should be able to:** CO1. List and use Object Oriented Programming concepts for problem solving. CO2. Write programs using Java collection API as well as the java standard class library. CO3. Solve the inter-disciplinary applications using the concept of inheritance. CO4. Apply JDBC to provide a program level interface for communicating with database using java programming. CO5. Apply the garbage collection for saving the resources automatically
11	Essentials of Networking (IT24)	**At the end of this course, each student should be able to:** CO1. Explore the basis of computer networks and various protocols. She/he will be in a position to understand the World Wide Web concepts. CO2. Administrate a network and flow of information

		further he/she can understand easily the concepts of network security, mobile and ad hoc networks. CO3. Enumerate the layers of the OSI model and TCP/IP, explain the function(s) of each layer. CO4. Analyze different MAC mechanisms (Aloha, Slotted Aloha, TDMA, and FDMA) and understand their pros and cons. CO5. Predict ethical, legal, security and social issues related to computer networks
12	Probability & Combinatorics (MTC31)	**At the end of this course, each student should be able to:** CO1. Identify distribution in certain realistic situation. CO2. Differentiate among many random variables involved in the probability models. CO3. Calculate mean and proportions (small and large sample) and to make important decisions from few samples which are taken out of unmanageably huge populations. CO4. Find the expected queue length, the ideal time, the traffic intensity and the waiting time. CO5.Know the random process, Markov process and Markov chains which are essentially models of many time dependent processes such as signals in communications, time series analysis, queuing systems. CO6. Find the limiting probabilities and the probabilities in the state.
13	Design And Analysis of Algorithm (T1-IT32)	**At the end of this course, each student should be able to:** CO1. Analyze algorithms and improve the efficiency of algorithm. CO2.Apply different designing methods for development of algorithms realistic problems, such as divide and conquer, greedy method and etc. CO3.Construct minimal spanning trees and find shortest path Between source and sink. CO4. Analyze and estimate the performance of algorithm. CO5.Describe the notations of P, NP, NP-complete, and NP- hard.
14	Object Oriented Analysis And Design (T1-IT33)	**At the end of this course, each student should be able to:** CO1. Demonstrate the Conceptual model of UML and SDLC.

		CO2. Define classes modeling techniques and instances modeling techniques. CO3. Describe interaction diagrams and their modeling techniques. CO4. Demonstrate activity diagram and their modeling techniques. CO5. Demonstrate component and deployment diagram.
15	DS & C++ Lab (T1-IT31L)	**At the end of this course, each student should be able to** This lab work provides hands-on for C++ & DS programs using C++ language learnt in theory session. C++ Programming assignments based on class, inheritance, abstraction, encapsulation, dynamic binding, polymorphism, I/O systems, exception handling should be covered DS using C++ assignments should be based on Stacks, Queue, Linked List and mainly it should cover Tree , Binary Threaded Tree & Graph programs
16	Optimization Techniques (ITC41)	**At the end of this course, each student should be able to:** CO1. After going through this course the student gets a thorough knowledge on optimization of electrical and electronic engineering problems through classical optimization techniques CO2. After going through this course the student gets a thorough knowledge on constrained non linear programming and dynamic programming CO3.Able to apply conceptual things to real-world electrical and electronics problems and applications
17	Research Methodology & Statistical Tools (ITC42)	**At the end of this course, each student should be able to:** CO1. An ability to learn the concepts of types of research, research process, measurement of variables and ethics in research. CO2. An ability to understand research problem, research design and data collection methods and tools. CO3. An ability to understand the concepts of univariate and bi variate techniques for data analysis. CO4. Ability to utilize multivariate techniques for data analysis. CO5. An ability to report research work and presentation of results.

18	Cloud Computing (T1-IT44)	**At the end of this course, each student should be able to:** CO1. Analyze the virtualization and cloud computing concepts. CO2. Learn the architecture, deployment models, and infrastructure models of Cloud Computing. CO3. Demonstrate knowledge on the cloud computing security, federation, presence, identity, and privacy CO4. Familiar with open source cloud computing software, and free/commercial cloud services. CO5.Learn the privacy policy of cloud providers
19	Service Oriented Architecture (T1-IT52)	**At the end of this course, each student should be able to** CO1.To gain understanding of the basic principles of service orientation CO2. To learn service oriented analysis techniques CO3.To learn technology underlying the service design CO4:To learn advanced concepts such as service composition, orchestration and Choreography CO5.To know about various WS specification standards
20	Big Data Analytics (T1-IT53)	**At the end of this course, each student should be able to** CO1. To Understand the Big Data challenges & opportunities ,its applications CO2. Gain conceptual understanding of NOSQL Database. CO3. Understanding of concepts of map and reduce and functional programming CO4. Gain conceptual understanding of Hadoop Distributed File System.