

Course Outcomes

S. No.	Subject Code	Subject	Course Outcomes
1.	3IT1A	Electronic Devices and Circuits	
2.	3IT2A	Data Structures and Algorithms	<p>CO1. Determine the time and space complexity of simple algorithms and defined algorithms.</p> <p>CO2. Use data structures such as: arrays, linked lists, stack, queue, tree and graphs.</p> <p>CO3. Use advanced data structures such as balanced search tree, AVL tree and B tree.</p> <p>CO4. Solve problems using the fundamental graph algorithms including depth-first search and breadth first search, topological sort, minimum spanning tree algorithm.</p>
3.	3IT3A	Digital Electronics	<p>CO1 To understand and examine the structure of various number systems and its application in digital design.</p> <p>CO2 Formulate and employ a Karnaugh Map to reduce Boolean expressions and logic circuits to their simplest forms.</p> <p>CO3 The ability to understand, analyze and design various combinational and sequential circuits.</p> <p>CO4 Ability to identify basic requirements for a design application and propose a cost effective solution.</p>
4.	3IT4A	Object Oriented Programming	<p>CO1 To understand the different programming paradigm</p> <p>CO 2 To know the principles of OOPs</p> <p>CO3 To Understand and apply the principles of inheritance and polymorphism.</p> <p>CO4 To develop programming skills of undergraduate students to solve basic real world problems using objective oriented programming techniques.</p>

5.	3IT5A	Linux & Shell Programming	
6.	3IT6A	Advanced Engineering Mathematics	<p>CO1. Solve the Linear, Non Linear and Transportation problems by the Optimization Techniques.</p> <p>CO2. Define the concept of divisibility, Congruence, Prime factorization and also properties of the Group, Ring and Field.</p> <p>CO3. Solve the Ordinary and Partial Differential equations by the help of Laplace Transform.</p> <p>CO4. Derive numerical methods for Interpolation, Numerical Differentiations and Integration and to solve Difference equation and Ordinary Differential equations.</p>
7.	4IT1A	Microprocessors and Interfaces	<p>CO1: Describe the Architecture of Intel 8085 microprocessor and its peripheral devices.</p> <p>CO2: Identify simple arithmetic assembly language programs for microprocessor applications for looping, stack and subroutine and to design of counters and time delay units.</p> <p>CO3: To describe the impart knowledge about various interfacing devices using microprocessor.</p> <p>CO4: To design the major component of computer including CPU, memory, and I/O in Computer Architecture</p>
8.	4IT2A	Discrete Mathematical Structures	
9.	4IT3A	Statistics and Probability Theory	<p>CO1. Understand and apply the concepts of probability theory, various probability distributions and their application in engineering.</p> <p>CO2. Understand the concept of principal of least square and linear relationship between</p>

			<p>two variables.</p> <p>CO3. Develop and apply Queuing models, understand the concept of Markov chain with its application.</p>
10.	4IT4A	Software Engineering	<p>CO1. To apply the theoretical aspects of system analysis.</p> <p>CO2. To know models of Software Development Life Cycle.</p> <p>CO3. To identify system design methods and their implementations.</p> <p>CO4. To apply different models for Object Oriented Analysis & Design.</p>
11.	4IT5A	Principles of Communication	
12.	4IT6A	Principles of Programming Languages	CO1: To identify the key paradigms used in developing modern programming languages.
			CO2. To explore the implementation of each language in sufficient detail to provide the graduates with an understanding of the relationship between a source program and its execution behavior.
			CO3. To identify the design issues of object oriented and functional languages.
			CO4. To identify the different programming languages syntax and semantics, which provide sufficient detail to demonstrate programs for real world applications
13.	5IT1A	Computer Architecture	<p>CO1: To identify the major component of computer including CPU, memory, and I/O in Computer Architecture.</p> <p>CO2: To describe the fundamentals of computer architecture and their relationship to CPU Designs.</p> <p>CO3: To analyze the operation of modern CPUs including pipelining, memory systems, buses & instruction of CPU.</p> <p>CO4: To discuss the techniques used by advanced computer architecture to communicate with I/O devices.</p>
14.	5IT2A	Digital Signal Processing	
15.	5IT3A	Telecommunication Fundamentals	<p>CO1: To apply the elementary technical terminology of networking in field of communication.</p> <p>CO2: To identify the methods how data flow is</p>

			<p>controlled over the network</p> <p>CO3: To identify difference between the wired and wireless transmission state of art in real world.</p> <p>CO4: To design and implement the switching, multiplexing concept and IP configuration of computer devices for data transmission</p>
16.	5IT4A	Database Management Systems	<p>CO1: To identify the basic concepts of database management system and terminology used for the subject.</p> <p>CO2: To apply sound design principles for logical design of databases, including the E-R modeling.</p> <p>CO3: To apply database for relational theory as well as query processing and optimization.</p> <p>CO4: To identify the schema refinement by normal forms and to apply the transaction processing and concurrency control.</p>
17.	5IT5A	Operating Systems	<p>CO1: To explain the fundamentals of Operating System, its architecture and its various application fields.</p> <p>CO2: To Compare the functioning of operating system includes various management systems, synchronization, memory classification etc</p> <p>CO3: To identify the various algorithms and hardware functioning related to operating system.</p> <p>CO4: To identify the working and features of various new Operating Systems</p>
18.	5IT6.2A	E-Commerce	<p>CO1: To understand the major programming paradigms and features, efficiency and the principles and techniques involved in design and implementation of new programming languages.</p> <p>CO2. To understand the elementary and structured data types and notations to describe syntax and semantics (and phase of compilation) of programming languages and its relationship.</p> <p>CO3. To understand the behavior of simple programs in imperative languages using concepts such as binding, Sequence control with expression, recursive subprograms and parameter passing mechanisms.</p>

			CO4. To understand the concepts of Abstract Data Type, information hiding, scoping, and exception handling and garbage collection object oriented programming for large scale software development.
19.	6IT1A	Computer Networks	
20.	6IT2A	Design and Analysis of Algorithms	CO1: Students would be able to describe, apply and analyze the complexity of certain divide and conquer method, greedy method.
			CO2: Students would be able to identify and analyze criteria and specifications appropriate to new problems of dynamic programming and branch and bound, pattern matching algorithms and assignment problem.
			CO3: Students would be able to describe the Randomized algorithms, classes P, NP, and NP-Complete and be able to prove that a certain problem is NP-Complete
			CO4: Students would be able to identify and analyze criteria and specifications appropriate to new problems of Pattern Matching
21.	6IT3A	Theory Of Computation	
22.	6IT4A	Programming in Java	CO1: Identify java programming syntax, control structures & java programming concepts.
			CO2. Identify the role of object oriented principles & general structures in building reusable code.
			CO3. Program using java concepts such as exception handling, overloading, file input/output etc.
			CO4. Attain the knowledge about concepts of applets, threads & graphics methods
23	6IT5A	Information Theory & Coding	CO1: To Apply the fundamental concepts of information theory viz. entropy, mutual information and channel capacity in communication system

			CO2: To Apply the principles of source coding and data transmission.
			CO3: To Analyze linear block code, cyclic code and Convolution code
			CO4: To Apply information theoretic methods to novel settings of encoding and decoding techniques
24	6IT6.1A	Advance Topics in Operating Systems	CO1: To identify the advanced concepts of operating system and the issues involved with them.
			CO2: To study the different components of operating system and to know how kernel deals with them along with the security issues
			CO3: To identify the basics needed for designing, augmenting and configuring different OS (like Linux and Windows) to be suitable for a particular deployment.
			CO4: To design, augment and configure; Multiprocessor OS, Multimedia OS and Mobile computing.
26.	7IT1A	Software Project management	CO1: Identify the basic concepts and issues of software project management , Parameters to be considered to improve the software economics. CO2: Apply SDLC methodology for development and identification of artifacts for each lifecycle phases. CO3: Apply activities necessary to successfully complete and close the software projects using all the checkpoints in development process. CO4: Apply the metrics for assessing the quality and cost; Acquire knowledge about automation building blocks and organization structure.
27.	7IT2A	Information System Security	CO1: Identify and classify computer & security threats and apply various substitution and transposition techniques. CO2: Apply mathematical techniques and codes for cryptography. CO3: Compare & implement various signature generation & verification algorithms and digital data security. CO4: Analyze the current IP security architecture & pursue his research in security field.
28.	7IT3A	Data Mining & Ware Housing	CO1: To identify the basic principles, concepts and applications of data warehousing, data mining and Knowledge discovery
			CO2: To apply concept description on data including algorithms for the same.

			CO3: To design concepts of classification and prediction in terms of data mining.
			CO4: To identify Schemas and Logical architecture of data warehousing with different operations of OLAP and learn how to work with data mining tool
29.	7IT4A	Internet Programming	CO1: To implement the formatting concepts of web pages using XHTML, CSS etc
			CO2: To generate alerts and validations using Java Script
			CO3: To create dynamic content on web pages using Ajax.
			CO4: To implement server side scripts like PHP, ASP.NET and attain the knowledge of making web pages and concept of session tracking
30.	7IT5A	Computer Graphics & Multimedia Techniques	CO1. To apply the applications of Computer Graphics.
			CO2. To identify the methods how rotation translation & scaling applied.
			CO3. To identify differences between object space & image space.
			CO4. To design and implement animation programs.
31.	7IT6.1A	Advance Database Management Systems	CO1: To apply the theoretical concept of queries in any Database Management field.
			CO2: To identify adequate knowledge of transactions and their execution in database.
			CO3: To identify the difference between the deadlock and recovery of concurrent transactions
			CO4: To implement how to make & secure the database and distributed Database and explore database by using extended queries in real world Problems.
32.	8IT1A	Software Testing & Validation	CO1: The students understand the software testing process as how validation and verification can be done.
			CO2: They shall be able to do various types of testing onto their projects.

			<p>CO3: The students can be able to specific problems related to object oriented system testing.</p>
			<p>CO4: They will be able to manage (define, formulate and analyze) a project if any debug arises and can applied required testing procedures</p>
33.	8IT2A	Digital Image Processing	
34.	8IT3A	Data Compression Techniques	<p>CO1: To enable graduates to learn the basic knowledge of image compression algorithms.</p>
			<p>CO2: To identify the details of decompression & animation.</p>
			<p>CO3: To enable graduates to learn the basic knowledge of lossy compression algorithms</p>
			<p>CO4: To identify the details of differential & Transform Encoding</p>
35.	8IT4.1A	Mobile Computing	<p>CO1: To identify fundamental of mobile communication system, influence of mobility. On applications, security issues & Mobile IP networks.</p>
			<p>CO2: To explain the concepts of Radio Transmission, Node Discovery & Mobile adhoc-Network.</p>
			<p>CO3: To compare various protocols and signal processing in Wireless Mobile Communication System.</p>
			<p>CO4: To explain the challenges of recent trends in mobile communication technologies</p>