Course Name: Data Structure & Algorithm (PCC-CS301):

At the completion of the course, students will be able to…

PCC-CS301.1: Differentiate how the choices of data structure & algorithm methods impact the Performance of program

PCC-CS301.2: Solve problems based upon different data structure & also write programs.

PCC-CS301.3: Identify appropriate data structure & algorithmic methods in solving problem.

PCC-CS301.4: Discuss the computational efficiency of the principal algorithms for sorting, searching and Hashing

PCC-CS301.5: Compare and contrast the benefits of dynamic and static data structures implementations.

Course Name: Computer Organization (PCC-CS302):

PCC-CS302.1: Understand basic structure of digital computer, stored program concept and different arithmetic and control unit operations.

PCC-CS302.2: Understand basic structure of different combinational circuits multiplexer, decoder, encoder etc.

PCC-CS302.3: Perform different operations with sequential circuits.

PCC-CS302.4: Understand memory and I/O operations.

Course Name: Formal Language & Automata Theory (CS-402):

After completion of this course,

CS-402.1: The students will be able to define a system and recognize the behavior of a system. They will be able to minimize a system and compare different systems.

CS-402.2: Students will be able to convert Finite Automata to Regular Expressions.

CS-402.3: Student will be able to check equivalence between regular grammar and FA.

CS-402.4: Students will understand the characteristics, construction and application of Push Down Automata.

CS-402.5: Students will be able to minimize Context Free Grammar.

CS-402.6: Students will be able to check equivalence of CFL and PDA.

CS-402.7: Students will be able to design Turing Machine.

Course Name: Computer Architecture (CS 403):

At the completion of the course, students will be able to…

CS 403.1: Use various metrics to calculate the performance of a computer system

CS 403.2: Identify the addressing mode of instructions

CS 403.3: Determine which hardware blocks and control lines are used for specific instructions

CS 403.4: Analyze clock periods, performance, and instruction throughput of single-cycle, multi-cycle, and pipelined implementations of a simple instruction set.

CS 403.5: Detect pipeline hazards and identify possible solutions to those hazards.

CS 403.6: Show how cache design parameters affect cache hit rate.

CS 403.7: Map a virtual address into a physical address.

Course Name: Design & Analysis of Algorithm (CS 501):

CS 501.1: Analyze the asymptotic performance of algorithms.

CS 501.2: Understand divide-and-conquer paradigm and explain when an algorithmic design situation calls for it.

EC CS 501.3: Understanding the dynamic-programming paradigm

CS 501.4: Understanding greedy paradigm.

CS 501.5: Explain the major graph algorithms and their analyses.

CS 501.6: Analyze randomized algorithms.

CS 501.7: Understand NP Completeness

Course Name: Object Oriented Programming (CS504D):

After completion of this course, the students will be able to,

CS504D .1: Design an Object Oriented System.

CS504D .2: Get familiar with Object Oriented Concepts.

CS504D .3: Implement Object Oriented Concepts using Java.

CS504D .4: Create and use classes, sub classes, interfaces, threads, exceptions etc.

CS504D .5: Create and use packages.

Course Name: Database Management System (CS601):

After completion of this course, the students will be able to,

CS601.1: Learn the importance of the subject related to current software industry.

CS601.2: Learn different concepts of schemas, instances, keys, constraints etc.

CS601.3: Learn to draw ER diagram to design database.

CS601.4: Minimize redundant data while maintaining the dependency preservation and lossless decomposition properties of the database using normalization.

CS601.5: Learn how concurrent transactions work successfully.

CS601.6: Learn to optimize query execution time using indexing and other techniques.

CS601.7: Write code in SQL and PL/SQL for real life application.

Course Name: Computer Network (CS 602):

Upon completion of this module, students will be able to:

CS 602.1: Have a good understanding of the OSI Reference Model and in particular have a good knowledge of Layers.

CS 602.2: Describe, analyse and compare a number of datalink, network, and transport layer protocols.

CS 602.3: Analyze the requirements for a given organizational structure and select the most appropriate networking architecture and technologies;

CS 602.4: Specify and identify deficiencies in existing protocols, and then go onto formulate new and better protocols;

CS 602.5: Have a working knowledge of datagram and internet socket programming

Course Name: CS 603(Operating System)

Cs 603.1 Describe the main components of a computer and understand how these are managed by the operating system.
CS 603.2 Demonstrate the concepts, structure and design of operating systems and its impact on application system design and performance
CS 603.3 Demonstrate competence in recognizing and using operating system features
CS 603.4 Discuss the issues involved in the management and security of an operating system.

Course Name: CS 604B(Computer Graphics)

CS 604B.1 To list the basic concepts used in computer graphics.
CS 604B.2 To implement various algorithms to scan, convert the basic geometrical primitives, transformations, Area filling, clipping.
CS 604B.3 To describe the importance of viewing and projections.
CS 604B.4 To understand a typical graphics pipeline .
CS 604B.5 To design an application with the principle

Course Name: CS 701(Software Engineering)

CS701.1 Identifying the key activities in Software Engineering and compare different process models
CS701.2 Identifying different software project planning activities
CS701.3 Systematic approaches of software requirements analysis and specification, and software design
CS701.4 Different approaches of software coding, documentation and testing
CS701.5 Concepts of software quality, software maintenance and configuration management

Course Name: CS 702(Compiler Design)

Cs 702.1 Study Different Phases of Compilation
CS 702.2 Elimination of Ambiguity from a Grammar and Design Unambiguous Grammars
CS 702.3 Understanding Different Types of Parsers
CS 702.4 Studying the Issues of Code Generation

Course Name: Artificial Intelligence (CS 703C):

CS 703C.1: Understand the various searching techniques, constraint satisfaction problem and example problems- game playing techniques.

CS 703C.2: Apply these techniques in applications which involve perception, reasoning and learning.

CS 703C.3: Explain the role of agents and how it is related to environment and the way of evaluating it and how agents can act by establishing goals.

CS 703C.4: Acquire the knowledge of real world Knowledge representation

Course Name: Data Warehousing & Data Mining (CS704C):

After completion of this course, the students will be able to,

CS704C .1: Distinguish different Data Warehouse and Data Mart architectures.

CS704C .2: Compare ER modeling vs. dimensional modeling.

CS704C .3: Design a Data Warehouse.

CS704C .4: Extract, Transform and Load data in Data Warehouse.

CS704C .5: Analyze data of data warehouse using On-Line Analytic Processing (OLAP) operations.

CS704C .6: Detect clusters from data (clustering).

CS704C .7: Predict class labels of data (classification).

Course Name: CS 705A(Internet Technology)

CS 705A.1	Having Idea About Internet, Intranet and Extranet
CS 705A.2	Getting Idea About Different Types of Protocol for Internet Technology
CS 705A.3	Understanding Classfull and Classless IP Addressing
CS 705A.4	Understanding Security Issues, Threads and Attacks
CS 705A.5	Understanding Implementations in HTML, JSP and PERL

Course Name: CS 801D(Cryptography & Network Security)

CS 801D.1 classify the symmetric encryption techniques
CS 801D.2 Illustrate various Public key cryptographic techniques
CS 801D.3 Evaluate the authentication and hash algorithms.
CS 801D.4 Summarize the intrusion detection and its solutions to overcome the attacks.
CS 801D.5 Discuss authentication applications and Basic concepts of system level security
CS 801D.6 Concepts of virus Trojan Horse and Worm

Course Name: ARCH 301(Computer Education)

ARCH 301.1 Understanding Basics of C Programing
ARCH 301.2 Understanding Number System
ARCH 301.3 Gaining Idea About Logical Operations and Gates

Course Name: EC 504B(Data Structure & C)

EC 504B.1 Select appropriate data structures as applied to specified problem definition.
EC 504B.2 Implement operations like searching, insertion, and deletion, traversing mechanism etc. on various data structures.
EC 504B.3 Students will be able to implement Linear and Non-Linear data structures.
EC 504B.4 Implement appropriate sorting/searching technique for given problem.
EC 504B.5 Design advance data structure using Non-Linear data structure.
EC 504B.6 Determine and analyze the complexity of given Algorithms.

Course Name: EC 703C(Computer Networks)

EC 703C.1 Understanding the basics of network-its criterias, types, topologies.
EC 703C.2 Getting Idea About reference models-OSI, TCP/IP
EC 703C.3 Understanding the concept of error detection, flow control,access control
EC 703C.4 Understanding about ALOHA, pure ALOHA etc
EC 703C.5 Gaining idea about the uses of Repeaters, Hubs, Bridges, Switches, Router, Gateway; and knowledge of addressing : IP addressing, subnetting etc
EC 703C.6 Introduction to DNS, SMTP, SNMP, FTP, HTTP & WWW and Security: Cryptography (Public, Private Key based), Digital Signature, Firewalls etc

Course Name: EC 705C(Database Management System)

EC 705C.1 Understanding Database Concept
EC 705C.2 Getting Idea About Various Data Models
EC 705C.3 Understanding Transaction Concept
EC 705C.4 Implementing SQL Queries