C101 APPLIED PROBABILITY AND STATISTICS

C101.1: Basic probability axioms and rules and the moments of discrete and continuous random variables.

C101.2: Consistency, efficiency and unbiasedness of estimators, method of maximum likelihood estimation and Central Limit Theorem.

C101.3: Use statistical tests in testing hypotheses on data.

C101.4: Perform exploratory analysis of multivariate data, such as multivariate normal density, calculating descriptive statistics, testing for multivariate normality.

C102 ADVANCED DATA STRUCTURES AND ALGORITHMS

C102.1: Design data structures and algorithms to solve computing problems

C102.2: Design algorithms using graph structure and various string matching algorithms to solve real-life problems

C102.3: Apply suitable design strategy for problem solving

C103 ADVANCED COMPUTER ARCHITECTURE

C103.1: Identify the limitations of ILP.

C103.2: Discuss the issues related to multiprocessing and suggest solutions

C103.3: Point out the salient features of different multicore architectures and how they exploit parallelism.

C103.4: Discuss the various techniques used for optimising the cache performance

C103.5: Design hierarchal memory system

C103.6: Point out how data level parallelism is exploited in architectures

C104 OPERATING SYSTEM INTERNALS

C104.1: To explain the functionality of a large software system by reading its source.

C104.2: To revise any algorithm present in a system.

C104.3: To design a new algorithm to replace an existing one.

C104.4: To apypropriately modify and use the data structures of the linux kernel for a different software system.

C105 ADVANCED SOFTWARE ENGINEERING

C105.1: Understand the advantages of various Software Development Lifecycle Models

C105.2: Gain knowledge on project management approaches as well as cost and schedule estimation strategies

C105.3: Perform formal analysis on specifications

C105.4: Use UML diagrams for analysis and design

C105.5: Architect and design using architectural styles and design patterns

C105.6: Understand software testing approaches

C105.7: Understand the advantages of DevOps practices

C106 MACHINE LEARNING TECHNIQUES

C106.1: Distinguish between, supervised, unsupervised and semi-supervised learning

C106.2: Apply the appropriate machine learning strategy for any given problem

C106.3: Suggest supervised, unsupervised or semi-supervised learning algorithms for any given problem

C106.4: Design systems that uses the appropriate graph models of machine learning

C106.5: Modify existing machine learning algorithms to improve classification efficiency

C107 DATA STRUCTURES LABORATORY

C107.1: Design and implement basic and advanced data structures extensively.

C107.2: Design algorithms using graph structures

C107.3: Design and develop efficient algorithms with minimum complexity using design techniques

C108 NETWORK DESIGN AND TECHNOLOGIES

C108.1: Identify the components required for designing a network

C108.2: Design a network at a high-level using different networking technologies

C108.3: Analyze the various protocols of wireless and cellular networks

C108.4: Discuss the features of 4G and 5G networks

C108.5: Experiment with software defined networks

C109 SECURITY PRACTICES

C109.1: Understand the core fundamentals of system security

C109.2: Apply the security concepts related to networks in wired and wireless scenario

C109.3: Implement and Manage the security essentials in IT Sector

C109.4: Able to explain the concepts of Cyber Security and encryption Concepts

C109.5 Able to attain a through knowledge in the area of Privacy and Storage security and related Issues

C110 INTERNET OF THINGS

C110.1: Analyze various protocols for IoT

C110.2: Develop web services to access/control IoT devices.

C110.3: Design a portable IoT using Rasperry Pi

C110.4: Deploy an IoT application and connect to the cloud.

C110.5: Analyze applications of IoT in real time scenario

C111 BIG DATA ANALYTICS

C111.1: Understand how to leverage the insights from big data analytics

C111.2: Analyze data by utilizing various statistical and data mining approaches

C111.3: Perform analytics on real-time streaming data

C111.4: Understand the various NoSql alternative database models

C112 PRINCIPLES OF PROGRAMMING LANGUAGES

C112.1: Describe syntax and semantics of programming languages

C112.2: Explain data, data types, and basic statements of programming languages

C112.3: Design and implement subprogram constructs, Apply object - oriented, concurrency, and event handling programming constructs

C112.4: Develop programs in LISP, ML, and Prolog

C113 MOBILE AND PERVASIVE COMPUTING

C113.1: Obtain a through understanding of Basic architecture and concepts of till Third Generation Communication systems.

C113.2: Explain the latest 4G Telecommunication System Principles.

C113.3: Incorporate the pervasive concepts.

C113.4: Implement the HCI in Pervasive environment.

C113.5: Work on the pervasive concepts in mobile environment

C114 DATA ANALYTICS LABORATORY

C114.1: Process big data using Hadoop framework

C114.2: Build and apply linear and logistic regression models

C114.3: Perform data analysis with machine learning methods

C114.4: Perform graphical data analysis

C201 SOFTWARE QUALITY ASSURANCE AND TESTING

C201.1: Perform functional and nonfunctional tests in the life cycle of the software product.

C201.2: Understand system testing and test execution process.

C201.3: Identify defect prevention techniques and software quality assurance metrics.

C201.4: Apply techniques of quality assurance for typical applications

C202 COMPILER OPTIMIZATION TECHNIQUES

C202.1: Identify the different optimization techniques for simple program blocks.

C202.2: Design performance enhancing optimization techniques.

C202.3: Perform the optimization on procedures.

C202.4: Ensure better utilization of resources

C203 INFORMATION STORAGE MANAGEMENT

C203.1: Select from various storage technologies to suit for required application.

C203.2: Apply security measures to safeguard storage & farm.

C203.3: Analyse QoS on Storage

C204 – PROJECT WORK

C204.1: Students will acquire the ability to make links across different areas of knowledge and to generate, develop and evaluate ideas and information so as to apply these skills to the project tasks

C204.2: Students will acquire the skills to critically analyze the problem, communicate effectively and to present ideas clearly and coherently to specific audience in both the written and forms.

C204.3: Students will acquire collaborative skills through working in a team to achieve common goals.

C204.4: Students will be able to learn on their own, reflect on their learning and take appropriate actions to improve it