C101 APPLIED PROBABILITY AND STATISTICS

C101.1: The student will able to acquire the basic concepts of Probability and Statistical techniques for solving mathematical problems which will be useful in solving Engineering problems

C101.2: It also helps to understand and characterize phenomenon which evolve with respect to time in a probabilistic manner

C102 DESIGN AND MANAGEMENT OF COMPUTER NETWORKS

C102.1: Identify the components required to build different types of networks

C102.2: Choose the required functionality at each layer for given application

C102.3: Identify solution for each functionality at each layer

C102.4: Trace the flow of information from one node to another node in the network

C103 ADVANCED DATA STRUCTURES AND ALGORITHMS

C103.1: Design and apply iterative and recursive algorithms.

C103.2: Design and implement optimization algorithms in specific applications.

C103.3: Design appropriate shared objects and concurrent objects for applications.

C103.4: Implement and apply concurrent linked lists, stacks, and queues

C104 MULTICORE ARCHITECTURES

C104.1: Identify the limitations of ILP and the need for multicore architectures

C104.2: Discuss the issues related to multiprocessing and suggest solutions

C104.3: Point out the salient features of different multicore architectures and how they exploit parallelism

C104.4: Critically analyze the different types of inter connection networks

C104.5: Discuss the architecture of GPUs, warehouse-scale computers and embedded processors

C105 IMAGE PROCESSING AND ANALYSIS

C105.1: Explain image modalities, sensing, acquisition, sampling, and quantization

C105.2: Explain image noise models and Implement spatial filter operations

C105.3: Explain frequency domain transformations and Implement frequency domain filters

C105.4: Apply segmentation algorithms, edge detection techniques

C105.5: Apply corner and interest point detection algorithms

C105.6: Implement image compression algorithms

C106 MOBILE AND PERVASIVE COMPUTING

C106.1: Design a basic architecture for a pervasive computing environment

C106.2: Design and allocate the resources on the 3G-4G wireless networks

C106.3: Analyze the role of sensors in Wireless networks

C106.4: Work out the routing in mesh network

C106.5: Deploy the location and context information for application development

C106.6: Develop mobile computing applications based on the paradigm of context aware computing and wearable computing

C107 ADVANCED DATA STRUCTURES LABORATORY

C107.1: Design and apply iterative and recursive algorithms.

C107.2: Design and implement algorithms using the hill climbing and dynamic programming and recursive backtracking techniques.

C107.3: Design and implement optimisation algorithms for specific applications.

C107.4: Design and implement randomized algorithms.

C107.5: Design appropriate shared objects and concurrent objects for applications.

C107.6: Implement and apply concurrent linked lists, stacks, and queues

C108 THEORETICAL FOUNDATIONS OF COMPUTER SCIENCE

C108.1: To explain sets, relations, functions

C108.2: To conduct proofs using induction, pigeonhole principle, and logic

C108.3: To apply counting, permutations, combinations, and recurrence relations

C108.4: To apply recursive functions and lambda calculus

C108.5: To explain logic programming and functional programming principles

C108.6: To apply sequential structures, tree structures, and graph structures

C109 ADVANCED DATABASES

C109.1: Select the appropriate high performance database like parallel and distributed database

C109.2: Model and represent the real world data using object oriented database

C109.3: Design a semantic based database to meaningful data access

C109.4: Embed the rule set in the database to implement intelligent databases

C109.5: Represent the data using XML database for better interoperability

C109.6: Handle Big data and store in a transparent manner in the cloud

C110 PRINCIPLES OF PROGRAMMING LANGUAGES

C110.1: Describe syntax and semantics of programming languages

C110.2: Explain data, data types, and basic statements of programming languages

C110.3: Design and implement subprogram constructs

C110.4: Apply object-oriented, concurrency, and event handling programming constructs

C110.5: Develop programs in Scheme, ML, and Prolog

C110.6: Understand and adopt new programming languages

C111 ADVANCED OPERATING SYSTEMS

C111.1: Discuss the various synchronization, scheduling and memory management issues

C111.2: Demonstrate the Mutual exclusion, Deadlock detection and agreement protocols of Distributed operating system

C111.3: Discuss the various resource management techniques for distributed systems

C111.4: Identify the different features of real time and mobile operating systems

C111.5: Install and use available open source kernel

C111.6: Modify existing open source kernels in terms of functionality or features used

C112 NETWORK AND INFORMATION SECURITY

C112.,1: Implement basic security algorithms required by any computing system.

C112.2: Analyze the vulnerabilities in any computing system and hence be able to design a security solution.

C112.3: Analyze the possible security attacks in complex real time systems and their effective countermeasures

C112.4: Identify the security issues in the network and resolve it.

C112.5: Evaluate security mechanisms using rigorous approaches, including theoretical derivation, modeling, and simulations

C112.6: Formulate research problems in the computer security field

C113 CLOUD COMPUTING

C113.1: Compare the strengths and limitations of cloud computing

C113.2: Identify the architecture, infrastructure and delivery models of cloud computing

C113.3: Apply suitable virtualization concept.

C113.4: Choose the appropriate cloud player

C113.5: Choose the appropriate Programming Models and approach.

C113.6: Address the core issues of cloud computing such as security, privacy and interoperability

C114 ADVANCED DATABASE LABORATORY

C114.1: Work on distributed databases

C114.2: Create and work on object oriented databases and work with parallel database

C114.3: Experiment on active database and explore the features of deductive database

C114.4: To work on weka tool for clustering and classification

C114.5: Represent the database using XML and work on it

C115 CASE STUDY – OPERATING SYSTEMS DESIGN

C115.1: Develop assigned modules of operating systems design carrying out coding, testing, and documentation work involved.

C115.2: Describe team issuses and apply suitable methods to resolve the same.

C115.3: Demonstrate individual competence in building medium size operating system components.

C115.4: Prepare suitable plan with clear statements of deliverables, and track the same.

C115.5: Prepare well-organized written documents to communicate individual work accomplished

C201 SOFTWARE PROCESS AND PROJECT MANAGEMENT

C201.1: Adopt a suitable process for software development

C201.2: Elicit functional and quality requirements and analyze, prioritize, and manage requirements

C201.3: Perform trade-off among conflicting requirements

C201.4: Estimate the efforts required for software development

C201.5: Control the artifacts during software development

C201.6: Adopt best practices for process improvement

C202 SOFTWARE DESIGN

C202.1: Describe different approaches to desigining a software application

C202.2: Analyze specifications and identify appropriate design strategies.

C202.3: Develop an appropriate design for a given set of requirements

C202.4: Identify applicable design patterns for the solution

C202.5: Abstract and document reusable design patterns

C202.6: Evaluate a given design against the specifications

C203 SOFTWARE QUALITY ASSURANCE

C203.1: Describe different approaches to testing software applications

C203.2: Analyze specifications and identify appropriate test generation strategies

C203.3: Develop an appropriate test design for a given test object

C203.4: Identify applicable measurements for the verification and validation effort

C203.5: Execute the test design and evaluate the testing effort based on adequate measures

C204 INFORMATION STORAGE MANAGEMENT

C204.1: Select from various storage technologies to suit for required application.

C204.2: Apply security measures to safeguard storage & farm.

C204.3: Analyse QoS on Storage

C205 – PROJECT WORK

C205.1: 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

C205.2: 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.

C205.3: Students will acquire collaborative skills through working in a team to achieve common goals.

C205.4: Students will be able to learn on their own, reflect on their learning and take appropriate actions to improve it