MEENAKSHI COLLEGE OF ENGINEERING

No-12,Vembuli Amman Koil Street, West K.K. Nagar,
Chennai – 78

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (PG)

REGULATION-2017

COURSE OUTCOMES

SEMESTER I

Course Name: MA5160 **- Applied Probability and Statistics**

CO1	Basic probability axioms and rules and the moments of discrete and continuous random variables
CO2	Consistency, efficiency and unbiasedness of estimators, method of maximum likelihood estimation and Central Limit Theorem
CO3	Use statistical tests in testing hypotheses on data
CO4	Perform exploratory analysis of multivariate data, such as multivariate normal density, calculating descriptive statistics, testing for multivariate normality

Course Name: CP5151 -Advanced Data Structures And Algorithms

CO1	Design data structures and algorithms to solve computing problems
CO2	Design algorithms using graph structure and various string matching algorithms to solve real-life problems
CO3	Apply suitable design strategy for problem solving

Course Name: CP5152 - Advanced Computer Architecture

CO1	Identify the limitations of ILP
CO2	Discuss the issues related to multiprocessing and suggest solutions
CO3	Point out the salient features of different multicore architectures and how they exploit parallelism
CO4	Discuss the various techniques used for optimising the cache performance
CO5	Design hierarchal memory system
CO6	Point out how data level parallelism is exploited in architectures

Course Name: CP4152 - Operating System Internals

CO1	To explain the functionality of a large software system by reading its source
CO2	To revise any algorithm present in a system
CO3	To design a new algorithm to replace an existing one
CO4	To design a new algorithm to replace an existing one

Course Name: CP5154 - Advanced Software Engineering

Course Outcomes	Description
CO1	Understand the advantages of various Software Development Lifecycle Models
CO2	Gain knowledge on project management approaches as well as cost and schedule estimation strategies
CO3	Perform formal analysis on specifications
CO4	Use UML diagrams for analysis and design
CO5	Architect and design using architectural styles and design patterns
CO6	Understand software testing approaches
CO7	Understand the advantages of DevOps practices

Course Name: CP5191 - Machine Learning Techniques

CO1	Distinguish between, supervised, unsupervised and semi-supervised learning
CO2	Apply the appropriate machine learning strategy for any given problem
CO3	Suggest supervised, unsupervised or semi-supervised learning algorithms for any given problem
CO4	Design systems that uses the appropriate graph models of machine learning
CO5	Modify existing machine learning algorithms to improve classification efficiency

Course Name: CP5161 - Data Structures Laboratory

CO1	Design and implement basic and advanced data structures extensively
CO2	Design algorithms using graph structures
CO3	Design and develop efficient algorithms with minimum complexity using design techniques.

SEMESTER II

Course Name: CP5201 - Network Design And Technologies

CO1	Identify the components required for designing a network
CO2	Design a network at a high-level using different networking technologies
CO3	Analyze the various protocols of wireless and cellular networks
CO4	Discuss the features of 4G and 5G networks
CO5	Experiment with software defined networks

Course Name: CP5291 -Security Practices

CO1	Understand the core fundamentals of system security
CO2	Apply the security concepts related to networks in wired and wireless scenario
CO3	Implement and Manage the security essentials in IT Sector
CO4	Able to explain the concepts of Cyber Security and encryption Concepts
CO5	Able to attain a through knowledge in the area of Privacy and Storage security and related Issues

Course Name: CP5292 -Internet Of Things

CO1	Analyze various protocols for IoT
CO2	Develop web services to access/control IoT devices
CO3	Design a portable IoT using Rasperry Pi
CO4	Deploy an IoT application and connect to the cloud
CO5	Analyze applications of IoT in real time scenario

Course Name: CP5293 -Big Data Analytics

CO1	Understand how to leverage the insights from big data analytics
CO2	Analyze data by utilizing various statistical and data mining approaches
CO3	Perform analytics on real-time streaming data
CO4	Understand the various NoSql alternative database models

Course Name: CP5001 -Principles of Programming Languages

CO1	Describe syntax and semantics of programming languages
CO2	Explain data, data types, and basic statements of programming languages
CO3	Design and implement subprogram constructs, Apply object - oriented, concurrency, pro and event handling programming constructs
CO4	Develop programs in LISP, ML, and Prolog.

Course Name: CP5094 -Information Retrieval Techniques

CO1	Build an Information Retrieval system using the available tools.
CO2	Identify and design the various components of an Information Retrieval system
CO3	Apply machine learning techniques to text classification and clustering which is used for efficient Information Retrieval
CO4	Design an efficient search engine and analyze the Web content structure .

Course Name: - CP5261 - Data Analytics Laboratory

CO1	Process big data using Hadoop framework
CO2	Build and apply linear and logistic regression models
CO3	Perform data analysis with machine learning methods
CO4	Perform graphical data analysis

Course Name: CP5281 - Term Paper Writing And Seminar

CO1	Conduct thorough research on a chosen topic using a variety of academic sources and databases
CO2	Produce a well-structured and coherent term paper that adheres to academic writing standards and citation styles
CO3	Demonstrate the ability to critically analyze and synthesize information from multiple sources to support arguments and conclusions
CO4	Deliver a clear and engaging seminar presentation of the term paper, effectively communicating key findings and insights
CO5	Participate in peer review sessions by providing constructive feedback on classmates' papers and integrating feedback into one’s own work.

SEMESTER III

Course Name: CP5005 -Software Quality Assurance and Testing

CO1	Perform functional and nonfunctional tests in the life cycle of the software product
CO2	Understand system testing and test execution process.
CO3	Identify defect prevention techniques and software quality assurance metrics
CO4	Apply techniques of quality assurance for typical applications

Course Name: CP5074 - Social Network Analysis

CO1	Work on the internals components of the social network
CO2	Apply core skills for visual analysis
CO3	Apply visualization techniques for various data analysis tasks
CO4	Design information dashboard
CO5	Apply social network in real time applications

Course Name: CP5009 -Data Visualization Techniques

CO1	Explain principles of visual perception
CO2	Apply core skills for visual analysis
CO3	Apply visualization techniques for various data analysis tasks
CO4	Design information dashboard

Course Name : **CP5311-Project Phase I**

CO1	Develop a detailed project plan that includes scope, objectives, timelines, and resource requirements
CO2	Demonstrate effective teamwork and communication skills while working on project tasks and delivering milestones
CO3	Conduct thorough research and analysis relevant to the project topic to support project development and decision-making
CO4	Apply problem-solving techniques to address challenges and obstacles encountered during the project phase
CO5	Create clear and organized project documentation, including progress reports.

SEMESTER IV

Course Name : **CP5411-Project Work II**

CO1	Implement and execute the project plan developed in Phase I, including managing tasks, timelines, and resources effectively.
CO2	Monitor and assess project progress against established milestones and objectives, making necessary adjustments to stay on track
CO3	Apply quality assurance practices to ensure that project deliverables meet specified standards and requirements
CO4	Maintain regular and effective communication with stakeholders to provide updates, gather feedback, and address concerns
CO5	Produce comprehensive final project documentation, including a detailed project report, analysis of outcomes, and recommendations for future work or improvements