Course Outcomes (CO) (R 2017)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING(PG)

Course Code: 101 Course Name:MA5160 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.
C101.5	The students should have the ability to use the appropriate and relevant, fundamental and applied mathematical and statistical knowledge, methodologies and modern computational tools.

Course Code: 102 Course Name:CP5151 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
C102.4	To study about NP Completeness of problems
C102.5	To select and design data structures and algorithms that is appropriate for problems.

Course Code: 103 Course Name:CP5152 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

Course Code: 104 Course Name:CP5153 OPERATING SYSTEMS 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.
C104.5	To understand how program execution happens in Linux.

Course Code: 105 Course Name:CP5154 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

Course Code: 106 Course Name:CP5191 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

Course Code: 107 Course Name:CP5161 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.
C107.4	Design data structures and algorithms to solve computing problems
C107.5	Design and develop heap structures.

Course Code: 108 Course Name:CP5201 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

Course Code: 109 Course Name:CP5291 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.

Course Code: 110 Course Name:CP5292 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

Course Code: 111 Course Name:CP5293 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
C111.5	To gain knowledge on Hadoop related tools such as HBase, Cassandra, Pig, and Hive for big data analytics

Course Code: 112 Course Name:IF5191 ADVANCED DATABASES

C112.1	To develop skills on databases to optimize their performance in practice.
C112.2	To analyze each type of databases and its necessity
C112.3	To design faster algorithms in solving practical database problems
C112.4	To understand the emerging databases like Mobile, XML, Cloud and Big Data
C112.5	To study the usage and applications of Object Oriented and Intelligent databases

Course Code: 113 Course Name:CP5071 IMAGE PROCESING AND ANALYSIS

C113.1	Design and implement algorithms for image processing applications that incorporates different concepts of medical Image Processing
C113.2	Familiar with the use of MATLAB and its equivalent open source tools

C113.3	Critically analyze different approaches to image processing applications
C113.4	Explore the possibility of applying Image processing concepts in various applications
C113.5	To appreciate the use of image processing in various applications

Course Code: 114 Course Name:CP5092 CLOUD COMPUTING TECHNOLOGIES

C114.1	Employ the concepts of storage virtualization, network virtualization and its management
C114.2	Apply the concept of virtualization in the cloud computing
C114.3	Identify the architecture, infrastructure and delivery models of cloud computing
C114.4	Develop services using Cloud computing
C114.5	Apply the security models in the cloud environment

Course Code: 115 Course Name:CP5261 DATA ANALYTICS LABORATORY

C115.1	Process big data using Hadoop framework
C115.2	Build and apply linear and logistic regression models
C115.3	Perform data analysis with machine learning methods
C115.4	Perform graphical data analysis
C115.5	To implement Map Reduce programs for processing big data

Course Code: 201 Course Name:CP5005 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.
C201.5	To learn the techniques for quality assurance and applying for applications

Course Code: 202 Course Name:CP5074 SOCIAL NETWORK ANALYSIS

C202.1	Work on the internals components of the social network
C202.2	Model and visualize the social network
C202.3	Mine the behaviour of the users in the social network
C202.4	Predict the possible next outcome of the social network
C202.5	Apply social network in real time applications

Course Code: 203 Course Name:CP5007 BIO-INSPIRED COMPUTING

C203.1	Implement and apply bio-inspired algorithms
C203.2	Explain random walk and simulated annealing
C203.3	Implement and apply genetic algorithms
C203.4	Explain swarm intelligence and ant colony for feature selection
C203.5	Apply bio-inspired techniques in image processing.

Course Code: 204 Course Name:CP5076 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
C204.4	Able to apply integrated themes and biodiversity, natural resources, pollution control and waste management.
C204.5	To learn security aspects of storage & data center

Course Code: 205 Course Name:CP7411 PROJECT WORK

C205.1	Gather, organize, summarize and interpret technical literature with the purpose of formulating a project proposal.
C205.2	Write a technical report summarizing state-of-the-art on an identified topic.
C205.3	Present the study using graphics and multimedia techniques.

C205.4	Define intended future work based on the technical review.
C205.5	Select and apply modern tools and technologies.