



MACET
MARTHANDAM COLLEGE OF
ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

COURSE OUTCOMES



MACET

MARTHANDAM COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

S.No	Sem	Course Code	Course Name
1.	I	MA5160	Applied Probability And Statistics
2	I	CP5151	Advanced Data Structures and Algorithms
3	I	CP5161	Data Structures Laboratory
4	I	CP5191	Machine Learning Techniques
5	I	CP5152	Advanced Computer Architecture
6	I	CP5153	Operating System Internals
7	I	CP5154	Advanced Software Engineering
8	II	CP5072	Software Architecture and Design
9	II	CP5261	Data Analytics Laboratory
10	II	CP5292	Internet of Things
11	II	IF5191	Advanced Databases
12	II	CP5291	Security Practices
13	II	CP5293	Big Data Analytics
14	II	CP5201	Network Design and Technologies
15	II	CP5281	Term Paper writing and Seminar
16	III	CP5073	Embedded Software Development
17	III	CP5074	Social Network Analysis
18	III	CP5076	Information Storage Management
19	III	CP5005	Software Quality Assurance and Testing
20	III	CP5311	Project work Phase I
21	IV	CP5411	Project work Phase II



DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

PROGRAM OUTCOMES (POs)

List of Program Outcomes

PO1	Apply the knowledge of mathematics, science, engineering fundamentals and engineering specialization to the solution for complex engineering problems.
PO2	Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
PO3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety and the cultural, societal and environmental considerations.
PO4	Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.
PO5	Create, select and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of their limitations.
PO6	Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	Understand the impact of professional engineering solutions in societal and environmental contexts and to demonstrate the knowledge and need for sustainable development.
PO8	Apply ethical principles and commit to professional ethics, responsibilities and norms of the engineering practice.
PO9	Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.
PO10	Communicate effectively on complex engineering activities with the engineering community and with society at large such as being able to comprehend and write effective reports and design documentation and to make effective presentations and to give and receive clear instructions.
PO11	Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work as a member and leader in a team to manage projects in multidisciplinary environments.
PO12	Recognize the need for preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



Program Specific Outcomes (PSOs)

List of Program Specific Outcomes

PSO1	Apply knowledge of computing to produce effective designs and solutions for specific problems, able to use software development tools, software systems, and modern computing platforms.
PSO2	Communicate computer science and engineering concepts, designs, and solutions effectively and professionally.
PSO3	Ability to apply domain Knowledge and expertise for enhancing research capability to transform innovative ideas into reality.



DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

Course Code & Course Name: MA5160 Applied Probability And Statistics

COURSE OUTCOMES (COs)

List of Course Outcomes

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 Code & Course Name : CP5151-Advanced Data Structures and Algorithms

COURSE OUTCOMES (COs)

List of Course Outcomes

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	Use appropriate linear/non-linear data structure operations for solving a given problem.
CO4	Apply appropriate graph algorithms for graph applications.
CO5	Apply suitable design strategy for problem solving

Course Code & Course Name : CP5161- Data Structures Laboratory

COURSE OUTCOMES (COs)

List of Course Outcomes

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.
CO4	Design data structures and algorithms to solve computing problems
CO5	Design algorithms using graph structure and various string matching algorithms to solve real-life problems



Course Code & Course Name :CP5191Machine Learning Techniques

COURSE OUTCOMES (COs)

List of Course Outcomes

CO	Course Outcomes
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 Code & Course Name : CP5152 Advanced Computer Architecture

COURSE OUTCOMES (COs)

List of Course Outcomes

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 and Point out how data level parallelism is exploited in architectures

Course Code & Course Name: CP5153 Operating System Internals

COURSE OUTCOMES (COs)

List of Course Outcomes

CO1	To explain the functionality of a large software system by reading its source
CO2	To revise any algorithm present in a system.



DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

CO3	To design a new algorithm to replace an existing one
CO4	To appropriately modify and use the data structures of the linux kernel for a different software system.
CO5	To understand how program execution happens in Linux

Course Code & Course Name : CP5154 Advanced Software Engineering

COURSE OUTCOMES (COs)

List of Course Outcomes

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 and Use UML diagrams for analysis and design
CO4	Architect and design using architectural styles and design patterns
CO5	Understand software testing approaches and Understand the advantages of DevOps practices



MACET
MARTHANDAM COLLEGE OF
ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

II SEMESTER



Course Code & Course Name :CP5072 Software Architecture and Design

COURSE OUTCOMES (COs)

List of Course Outcomes

CO1	Understand the need of software architecture for sustainable dynamic systems.
CO2	Have a sound knowledge on design principles and to apply for large scale systems
CO3	Design architectures for distributed heterogeneous systems
CO4	Have good knowledge on service oriented and model driven architectures and the aspect oriented architecture.
CO5	Have a working knowledge to develop appropriate architectures through various case studies

Course Code & Course Name :CP5261 Data Analytics Laboratory

COURSE OUTCOMES (COs)

List of Course Outcomes

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
CO5	Work with big data tools and its analysis techniques

Course Code & Course Name : **CP5292 Internet of Things**

COURSE OUTCOMES (COs)

List of Course Outcomes

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



Course Code & Course Name :IF5191 Advanced Databases

COURSE OUTCOMES (COs)

List of Course Outcomes

CO1	To develop skills on databases to optimize their performance in practice.
CO2	To analyze each type of databases and its necessity
CO3	To design faster algorithms in solving practical database problems
CO4	To understand the design of databases.
CO5	To acquire knowledge on parallel and distributed databases and its applications.

Course Code & Course Name : CP5291 Security Practices

COURSE OUTCOMES (COs)

List of Course Outcomes

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 Code & Course Name: CP5293 Big Data Analytics

COURSE OUTCOMES (COs)

List of Course Outcomes

CO1	Understand how to leverage the insights from big data analytics
CO2	Understand big data frameworks
CO3	Analyze data by utilizing various statistical and data mining approaches
CO4	Perform analytics on real-time streaming data
CO5	Understand the various NoSql alternative database models



Course Code & Course Name :CP5201 Network Design and Technologies

COURSE OUTCOMES (COs)

List of Course Outcomes

CO1	Identify the components required for designing a network
CO2	Design a network at 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 Code & Course Name :CP5281 Term Paper writing and Seminar

COURSE OUTCOMES (COs)

List of Course Outcomes

CO1	Identify the Domain Specific Objective
CO2	Summarize the Literature Survey Prepare presentation for the research undergone
CO3	Analyzing different Methodologies
CO4	Produce final draft of the Research Paper.
CO5	Prepare presentation for the research undergone



MACET
MARTHANDAM COLLEGE OF
ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

III SEMESTER



Course Code & Course Name :CP5073Embedded Software Development

COURSE OUTCOMES (COs)

List of Course Outcomes

CO1	Understand different architectures of embedded processor, microcontroller and peripheral devices.
CO2	Interface memory and peripherals with embedded systems.
CO3	Work with embedded network environment.
CO4	Understand challenges in Real time operating systems.
CO5	Design and analyze applications on embedded systems

Course Code & Course Name :CP5074 Social Network Analysis

COURSE OUTCOMES (COs)

List of Course Outcomes

CO1	Work on the internals components of the social network
CO2	Model and visualize the social network
CO3	Mine the behaviour of the users in the social network
CO4	Predict the possible next outcome of the social network
CO5	Apply social network in real time applications

Course code &Name : CP5076 Information Storage Management

COURSE OUTCOMES (COs)

List of Course Outcomes

CO	Course Outcomes
CO1	Select from various storage technologies to suit for required application.
CO2	Apply security measures to safeguard storage & farm.
CO3	Analyse QoS on Storage.
CO4	Establish & manage datacenter.
CO5	Learn security aspects of storage & data center



Course Code & Course Name: CP5005 Software Quality Assurance and Testing

COURSE OUTCOMES (COs)

List of Course Outcomes

CO1	Perform functional and non functional tests in the life cycle of the software product
CO2	Understand System testing and test execution process
CO3	Identify defect prevention techniques and Analyze software quality assurance Metrics
CO4	Identify the quality Metrics and Maturity Models
CO5	Apply techniques of quality assurance for typical application

Course Code & Course Name :CP5311 Project work Phase I

COURSE OUTCOMES (COs)

List of Course Outcomes

CO1	Demonstrate a sound technical knowledge of their selected project topic .
CO2	Undertake problem identification, formulation and solution .
CO3	Design engineering solutions to complex problems utilizing a systems approach
CO4	Conduct an Engineering Project and Communicate with engineers and the community at large in written an oral forms.
CO5	Demonstrate the knowledge, skills and attitudes of a professional engineer.



MACET
MARTHANDAM COLLEGE OF
ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

IV SEMESTER



DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

Course Code & Course Name :CP5411 Project work Phase II

COURSE OUTCOMES (COs)

List of Course Outcomes

CO1	Demonstrate a sound technical knowledge of their selected project topic .
CO2	Undertake problem identification, formulation and solution .
CO3	Design engineering solutions to complex problems utilizing a systems approach
CO4	Conduct an Engineering Project and Communicate with engineers and the community at large in written an oral forms.
CO5	Demonstrate the knowledge, skills and attitudes of a professional engineer.