R.M.K. ENGINEERING COLLEGE

(An Autonomous Institution)
R.S.M Nagar, Kavaraipettai, Gummidipoondi Taluk Thiruvallur District, Tamil Nadu- 601206
Affiliated to Anna University, Chennai / Approved by AICTE, New Delhi
Accredited by NAAC with A+ Grade / An ISO 9001:2015 Certified Institution
All the Eligible UG Programs are Accredited by NBA, New Delhi

DEPARTMENT OF INFORMATION TECHNOLOGY

Course Outcomes – ODD Semester 2020-2021

Sl. No.	Semester	Theory/Practical	Course Code / Course Name
1)	3	Theory	MA8351 – Discrete Mathematics
2)	3	Theory	CS8351 - Digital Principles and System Design
3)	3	Theory	CS8391 – Data Structures
4)	3	Theory	CS8392 – Object Oriented Programming
5)	3	Theory	EC8394 – Analog and Digital Communications
6)	3	Practical	CS8381 - Data Structures Laboratory
7)	3	Practical	CS8383 - Object Oriented Programming Laboratory
8)	3	Practical	CS8382 - Digital Systems Laboratory
9)	3	Practical	HS8381 - Interpersonal Skills/Listening &Speaking
10)	5	Theory	MA8551 - Algebra and Number Theory
11)	5	Theory	CS8591 - Computer Networks
12)	5	Theory	EC8691 - Microprocessors and Microcontrollers
13)	5	Theory	IT8501 - Web Technology
14)	5	Theory	CS8494 - Software Engineering
15)	5	Theory	OCE551 - Air Pollution and Control Engineering
16)	5	Practical	EC8681 - Microprocessors and Microcontrollers Laboratory
17)	5	Practical	CS8581 - Networks Laboratory
18)	5	Practical	IT8511 - Web Technology Laboratory
19)	7	Theory	CS8791 – Cloud Computing
20)	7	Theory	MG8591 – Principles of Management
21)	7	Theory	CS8792 - Cryptography and Network Security
22)	7	Theory	CS8079 - Human Computer Interaction
23)	7	Theory	OME752 – Supply Chain Management
24)	7	Theory	GE8077 - Total Quality Management
25)	7	Practical	IT8711 – FOSS and Cloud Computing Laboratory
26)	7	Practical	IT8761 – Security Lab

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Third Semester B.Tech.

MA8351 – Discrete Mathematics

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Find the pcnf & pdnf, rules of inference theory and proof methods.
CO2	Understanding the mathematical induction methods and Inclusion and exclusion principle and Applying its applications.
CO3	Apply the concepts and techniques of Graphs and graph models
CO4	Be exposed to concepts and properties of algebraic structures such as groups, rings and fields.
CO5	Understanding lattices and Boolean algebra
CO6	Develop knowledge in Logic, Graphs and algebraic system in engineering.

CS8351 - Digital Principles and System Design

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Design Digital Circuits using simplified Boolean functions
CO2	Analyze and Design Combinational Circuits
CO3	Analyze and Design Synchronous Sequential Circuits
CO4	Analyze and Design Asynchronous Sequential Circuits
CO5	Implement designs using Programmable Logic Devices
CO6	Write HDL code for Combinational and Sequential Circuits

CS8391 – Data Structures

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Implement abstract data types using arrays and linked list.
CO2	Apply the linear data structures stack and queue to various computing problems.
CO3	Make use of different types of trees, a non-linear data structure, for problem solving.
CO4	Implement the nonlinear data structure, graph, along with its various operations for computational applications.
CO5	Differentiate the various sorting and searching algorithms.
CO6	Explain the different types of hashing techniques.

CS8392 – Object Oriented Programming

COs	Course Outcome : The students, after the completion of the course, are expected to ….
CO1	Develop Java programs using OOP principles
CO2	Develop Java programs using the concepts of inheritance and interfaces

CO3	Build Java applications using exceptions and I/O streams
CO4	Develop Java applications with threads and generics classes
CO5	Develop interactive Java programs using swings
CO6	Develop an application based upon the concepts of Java.

EC8394 – Analog and Digital Communication

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Make use of the principles of analog communication techniques
CO2	Make use of the principles of pulse communication techniques
CO3	Utilize the fundamentals of data communication
CO4	Utilize the principles of digital communication techniques
CO5	Solve source coding and error control coding problems
CO6	Make use of the fundamentals of multi-user radio communication

Laboratory

CS8381 - Data Structures Laboratory

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Write functions to implement linear and non-linear data structure operations
CO2	Suggest appropriate linear / non-linear data structure operations for solving a given problem
CO3	Appropriately use the linear / non-linear data structure operations for a given problem
CO4	Apply appropriate hash functions that result in a collision free scenario for data storage and retrieval.

CS8383 - Object Oriented Programming Laboratory

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Develop and implement Java programs for simple applications that make use of classes Packages and interfaces.
CO2	Develop and implement Java programs with array list, exception handling and multithreading.
CO3	Design applications using file processing, generic programming and event handling.

CS8382 - Digital Systems Laboratory

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Implement simplified combinational circuits using basic logic gates.
CO2	Implement combinational circuits using MSI devices.

CO3	Implement sequential circuits like registers and counters.
CO4	Simulate combinational and sequential circuits using HDL.

HS8381 - Interpersonal Skills / Listening & Speaking

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Listen and respond appropriately.
CO2	Participate in group discussions.
CO3	Make effective presentations.
CO4	Participate confidently and appropriately in conversations both formal and informal.

Fifth Semester B.Tech.

MA8551 - Algebra and Number Theory

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Apply the basic notions of groups, rings, fields which will then be used to solve related problems.
CO2	Explain the fundamental concepts of advanced algebra and their role in modern mathematics and applied contexts.
CO3	Demonstrate accurate and efficient use of advanced algebraic techniques.
CO4	Demonstrate their mastery by solving non - trivial problems related to the concepts, and by proving simple theorems about the, statements proven by the text.
CO5	Apply integrated approach to number theory and abstract algebra, and provide a firm basis for further reading and study in the subject.

CS8591 - Computer Networks

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Understand the basic layers and its functions in computer networks
CO2	Evaluate the performance of a network
CO3	Understand the basics of how data flows from one node to another
CO4	Analyze and design routing algorithm and protocols for various functions in the network
CO5	Analyze functionalities and protocols at the Transport Layer
CO6	Understand the working of various application layer protocols

EC8691 - Microprocessors and Microcontrollers

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Explain the basic architecture of 8086 microprocessor
CO2	Explain the 8086 configuration and design a system.
CO3	Analyze I/O circuits.
CO4	Analyze Memory Interfacing circuits.
CO5	Explain the basic architecture of 8051 microcontroller.

CO6	Design and implement 8051 micro controller-based systems.

IT8501 - Web Technology

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Design simple web pages using markup languages like HTML and XHTML.
CO2	Create dynamic web pages using DHTML and java script that is easy to navigate and use.
CO3	Program server-side web pages that have to process request from client-side web pages.
CO4	Represent web data using XML and develop web pages using JSP.
CO5	Understand various web services and how these web services interact.

CS8494 - Software Engineering

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Identify the key activities in managing a software project.
CO2	Compare different process models.
CO3	Concepts of requirements engineering and Analysis Modeling.
CO4	Apply systematic procedure for software design and deployment.
CO5	Compare and contrast the various testing and maintenance.
CO6	Manage project schedule, estimate project cost and effort required.

OCE551 - Air Pollution and Control Engineering

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Understand the atmospheric process and pollutant transport mechanism
CO2	Apply modeling techniques and to determine the fate of air pollutant with respect to time and space
CO3	Prevent and control air pollution by suitable air pollution control measures
CO4	Control and Monitoring of gaseous contaminants in air pollution
CO5	Prevent, control and measure of Indoor air quality management

Laboratory

EC8681 - Microprocessors and Microcontrollers Laboratory

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Write ALP Programs for fixed and Floating Point and Arithmetic operations
CO2	Interface different I/Os with processor
CO3	Generate waveforms using Microprocessors
CO4	Execute Programs in 8051
CO5	Explain the difference between simulator and Emulator

CS8581 - Networks Laboratory

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Implement various protocols using TCP and UDP.
CO2	Compare the performance of different transport layer protocols.
CO3	Use simulation tools to analyze the performance of various network protocols.
CO4	Analyze various routing algorithms.
CO5	Implement error correction codes.

IT8511 - Web Technology Laboratory

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Design simple web pages using markup languages like HTML and XHTML.
CO2	Create dynamic web pages using DHTML and java script that is easy to navigate and use.
CO3	Program server-side web pages that have to process request from client-side web pages.
CO4	Represent web data using XML and develop web pages using JSP.
CO5	Understand various web services and how these web services interact.

Seventh Semester B.Tech.

CS8791 – Cloud Computing

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Describe the principles of Parallel and Distributed Computing and evolution of cloud computing from existing technologies
CO2	Implement different types of Virtualization technologies and Service Oriented Architecture systems
CO3	Elucidate the concepts of NIST Cloud Computing architecture and its design challenges
CO4	Analyze the issues in Resource provisioning and Security governance in clouds
CO5	Choose among various cloud technologies for implementing applications
CO6	Install and use current cloud technologies

MG8591 – Principles of Management

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Describe the historical evolution of management theories for business organizations
CO2	Demonstrate the use of planning tools for strategic management
CO3	Identify the most appropriate organizational structure.
CO4	Discuss HR strategies for planning, recruiting and training employees.
CO5	Explain the theories of motivation and leadership to manage a group.
CO6	Summarize the controlling methods and tools to increase productivity of the Organization.

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CS8792 - Cryptography and Network Security

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Understand the fundamentals of networks security, security architecture, threats and vulnerabilities
CO2	Apply the different cryptographic operations of symmetric cryptographic algorithms
CO3	Apply the different cryptographic operations of public key cryptography
CO4	Apply the various Authentication schemes to simulate different applications.
CO5	Understand various Security practices
CO6	Understand System security standards

CS8079 - Human Computer Interaction

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Examine the effective dialog for HCI
CO2	Inspect interactive design process in human computer interaction
CO3	Inspect software design process in human computer interaction
CO4	Examine various models and theories related to human computer interaction
CO5	Utilize the HCI implications for designing multimedia/ e-commerce/ e-learning Web sites
CO6	Build meaningful user interface

OME752 – Supply Chain Management

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Understand fundamental supply chain management concepts.
CO2	Understand the design factors and various design options of distribution networks in industries
CO3	Understand the framework of supply chain networks and functions
CO4	Understand the foundational role of logistics as it relates to transportation and warehousing.
CO5	Understand the various sourcing decisions in supply chain
CO6	Understand the supply chain management in IT industries

GE8077 - Total Quality Management

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Understand the quality philosophies and customer focused managerial system
CO2	Summarize the quality management principles
CO3	Apply six sigma concepts in manufacturing and service sector
CO4	Determine the tools and techniques for quality improvement.
CO5	Analyze standards and auditing system on implementation of TQM.
CO6	Analyze standards for the operation of EMS.

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Laboratory

IT8711 – FOSS and Cloud Computing Laboratory

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Configure various virtualization tools such as Virtual Box, VMware workstation
CO2	Design and deploy a web application in a PaaS environment
CO3	Learn how to simulate a cloud environment to implement new schedulers.
CO4	Install and use a generic cloud environment that can be used as a private cloud
CO5	Manipulate large data sets in a parallel environment.

IT8761 – Security Laboratory

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Develop code for classical Encryption Techniques to solve the problems.
CO2	Build cryptosystems by applying symmetric and public key encryption algorithms
CO3	Construct code for authentication algorithms
CO4	Develop a signature scheme using Digital signature standard.
CO5	Demonstrate the network security system using open source tools