



# R.M.K. ENGINEERING COLLEGE

(An Autonomous Institution)

R.S.M NAGAR, KAVARAIPETTAI – 601 206

Affiliated to Anna University, Chennai /Approved by AICTE, New Delhi/

Accredited by NAAC with A+ Grade / ISO 21001:2018 Certified Institution/

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## DEPARTMENT OF INFORMATION TECHNOLOGY

### Course Outcomes – Even Semester 2023-2024

Sl. No.	Semester	Theory / Lab / Practical / Lab Integrated	Course Code / Course Name
1)	4	Lab Integrated	22MA401 - Probability and Statistics
2)	4	Lab Integrated	22IT401 – Artificial Intelligence and Machine Learning
3)	4	Lab Integrated	22IT402 - Computer Architecture and Microprocessors
4)	4	Lab Integrated	22IT403 – Web Development Frameworks
5)	4	Lab Integrated	22IT404 – Application System Design with UML
6)	4	Lab Integrated	22IT903 – Software Testing and Automation
7)	4	Laboratory Course	22ME411 – Product Development Lab - 4
8)	4	Practical	22CS411 – Aptitude and Coding Skills - II
9)	6	Theory	20CS701 – Cloud Computing
10)	6	Theory	20IT601 – Mobile Architecture and Development
11)	6	Theory	20CB005 – Design Thinking
12)	6	Lab Integrated	20IT909 – Advanced Java - JEE
13)	6	Lab Integrated	20IT930 – Artificial Intelligence and Machine Learning
14)	6	Practical	20CS611 – Mobile Application Development Laboratory
15)	6	Practical	20CS711– Cloud Computing Laboratory
16)	6	Practical	20IT611 – Mini Project - II
17)	6	Practical	20CS614 – Advanced Aptitude and CodingSkills - II

<b>22MA401 - Probability and Statistics</b>	
<b>COs</b>	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Compute the statistical measures of standard distributions
CO2	Determine the correlation and regression for two dimensional random variables.
CO3	Implement the concept of testing of hypothesis to solve real life problems.
CO4	Apply the concept of analysis of variance for various experimental designs.
CO5	Prepare the control charts for variables and attributes for analyzing the data.
CO6	Analyze Statistical data using R programming.

<b>22IT401 – Artificial Intelligence and Machine Learning</b>	
<b>COs</b>	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Explain the problem solving and search strategies.
CO2	Demonstrate the techniques for knowledge representation and reasoning.
CO3	Interpret various forms of learning, artificial neural networks and its applications.
CO4	Experiment various machine learning algorithms.
CO5	Employ AI and machine learning algorithms to solve real world problems.

<b>22IT402 - Computer Architecture and Microprocessors</b>	
<b>COs</b>	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Describe the basics structure of computers, operations and instructions.
CO2	Design arithmetic and logic unit.
CO3	Demonstrate simple and pipelined Datapath construction.
CO4	Examine the various memory systems and I/O communication.
CO5	Demonstrate the architecture of 8086 microprocessor and assembly programming.

<b>22IT403 – Web Development Frameworks</b>	
<b>COs</b>	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Personalize web pages using text formatting, graphics, audio, and video.
CO2	Hands on knowledge on Rest API , propTypes.
CO3	Able to develop a web application using latest React Framework.
CO4	Apply various React features including functions, components, and services
CO5	Able to develop application using ReactJs hooks

<b>22IT404 – Application System Design with UML</b>	
<b>COs</b>	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	To understand business problem statement in object-oriented notation
CO2	Covert the analysis phase to design modeling.
CO3	Identify various scenarios based on software requirements
CO4	Implement Static diagrams and Dynamic modeling using UML Modeling
CO5	To build an extendable and scalable solution using Design patterns
CO6	Develop and implement simple applications that make use of classes, packages and interfaces

## Professional Elective - I

<b>22IT903 – Software Testing and Automation</b>	
COs	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Obtain an insight to software testing.
CO2	Apply both black box testing and white box testing.
CO3	Understand and apply multiple levels of testing.
CO4	Understand the role of a tester as an individual and as a team member.
CO5	Apply software testing for large projects using automated testing tools.
CO6	Maintain documentation on testing.

<b>22ME411 – Product Development Lab - 4</b>	
COs	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Identify the real-time problems through literature
CO2	Develop feasible solutions for the problems.
CO3	Evaluate the methods to develop solutions to the problem.
CO4	Analyze the business opportunities for a new product
CO5	Prepare a detailed report for the experimental dissemination

<b>22CS411 – Aptitude and Coding Skills - II</b>	
COs	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Develop advanced vocabulary for effective communication and reading skills
CO2	Build an enhanced level of logical reasoning and quantitative skills.
CO3	Develop error correction and debugging skills in programming
CO4	Apply data structures and algorithms in problem solving.

## Sixth Semester B.Tech.

<b>20CS701– Cloud Computing</b>	
COs	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Articulate the main concepts and key technologies of cloud computing.
CO2	Learn various cloud services and platforms to cater the requirements in the growth of the businesses.
CO3	Develop the ability to understand the cloud infrastructure and virtualization that help in the development of cloud.
CO4	Explain the high-level automation and orchestration systems that manage the virtualized infrastructure.
CO5	Summarizes the programming paradigms used in cloud and how cloud software deployments scale to large numbers of users.

<b>20IT601– Mobile Architecture and Development</b>	
COs	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Explain the Android Architecture and various mobile platforms
CO2	Develop simple Android application with basic building blocks using Mobile UI resources
CO3	Analyze Android Graphics and Multimedia APIs for app development, and evaluate the developed app through testing
CO4	Utilize cross-platform development tools such as Xamarin, Xamarin.iOS, and Xamarin.Windows to create efficient mobile and desktop applications for various platforms
CO5	Develop Cross-Platform Applications with Angular and NativeScript

### **Open Elective - I**

<b>20CB005 – Design Thinking</b>	
<b>COs</b>	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Understand the phases of design thinking process
CO2	Conduct an immersion activity to create an empathy map
CO3	Define the key problems of the persona as created
CO4	Apply the ideation phase steps to present the prototype ideas
CO5	Create a prototype with value propositions and test the prototype

### **Professional Elective - II**

<b>20IT909 – Advanced Java – JEE</b>	
<b>COs</b>	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Understand the concepts of JEE and build tools like maven
CO2	Apply core Technologies in real world application
CO3	Demonstrate real world application in different frameworks like spring and spring MVC
CO4	Apply logging process and spring security in real world applications

### **Professional Elective - III**

<b>20IT930 – Artificial Intelligence and Machine Learning</b>	
<b>COs</b>	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Provide a basic exposition to the goals and methods of Computational Intelligence
CO2	Study of the design of intelligent computational techniques
CO3	Apply the Intelligent techniques for problem solving
CO4	Improve problem solving skills using the acquired knowledge in the areas of reasoning, natural language understanding
CO5	Improve problem solving skills using the acquired knowledge in the areas of computer vision, automatic programming and machine learning
CO6	Use different machine learning techniques to design AI machine and enveloping applications for real world problems.

<b>20CS611 – Mobile Application Development Laboratory</b>	
<b>COs</b>	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Develop mobile applications using GUI and Layouts.
CO2	Develop mobile applications using Event Listener.
CO3	Develop mobile applications using Databases.
CO4	Create mobile applications using RSS Feed, Internal/External Storage, SMS, Multi- threading and GPS.
CO5	Analyze and discover own mobile app for simple needs.

<b>20CS711 – Cloud Computing Laboratory</b>	
<b>COs</b>	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
<b>CO1</b>	Configure various virtualization tools such as Virtual Box, VMware workstation
<b>CO2</b>	Design and deploy a web application in a PaaS environment
<b>CO3</b>	Learn how to simulate a cloud environment to implement new schedulers.
<b>CO4</b>	Install and use a generic cloud environment that can be used as a private cloud
<b>CO5</b>	Manipulate large data sets in a parallel environment.

<b>20IT611 – Mini Project - II</b>	
<b>COs</b>	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Define the problem statement, study of requirements; study related Literature and the possible feasibilities.
CO2	Demonstrate a sound technical knowledge of their selected project domain.
CO3	Analyze the problem statement and design the architecture and modules for the proposed system
CO4	Implement the problem and test the project with various test cases
CO5	Demonstrate the knowledge, skills and attitudes of a software professional
CO6	To take up challenging real world problems and find solution using appropriate methodology.

<b>20CS614 – Advanced Aptitude and Coding Skills - II</b>	
<b>COs</b>	<b>Course Outcome: The students, after the completion of the course, are expected to ....</b>
CO1	Develop advanced vocabulary for effective communication and reading skills
CO2	Build an enhanced level of logical reasoning and quantitative skills.
CO3	Develop error correction and debugging skills in programming
CO4	Apply data structures and algorithms in problem solving.