



# 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 21001:2018 Certified Institution / All the Eligible UG Programs are Accredited by NBA, New Delhi



## Department of Computer Science and Business Systems

### COURSE OUTCOMES 2024 – 2025 EVEN SEMESTER

Sl. No.	Semester	Course Code	Course Title
1	4	22CB401	Introduction to Innovation, IP Management and Entrepreneurship
2	4	22CB402	Marketing Research and Marketing Management
3	4	22CB403	Operating Systems
4	4	22CB404	Design And Analysis of Algorithms
5	4	22IT407	Web Development Frameworks
6	4	22MA404	Operations Research
7	4	22ME411	Product Development Lab - 4
8	4	22CS411	Aptitude and Coding Skills II
9	4	22CB411	Mini Project
10	4		Value Education (Non Credit)
11	6	22CB601	Financial Management
12	6	22CB602	Information Security
13	6	22CB603	Artificial Intelligence
14	6	22CB907	Cloud, Microservices and Application (Professional Elective III)
15	6	22CB911	Introduction to Fintech (Professional Elective IV)
16	6	22CS001	Ethical Hacking (Open Elective)
17	6	22CB604	IT Workshop using Scilab
18	6	22CS614	Advanced Aptitude and Coding Skills – II
19	8	22CB811	Project Work



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### FOURTH SEMESTER

#### 22CB401 INTRODUCTION TO INNOVATION, IP MANAGEMENT & ENTREPRENEURSHIP

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Understand the basics of Innovation and Entrepreneurship
CO2	Manage an innovation program
CO3	Create, protect, assetize and commercialize intellectual property
CO4	Understand opportunities and challenges for entrepreneurs
CO5	Developing mindsets to pursue entrepreneurship
CO6	Identify and discover market needs

#### 22CB402 MARKETING RESEARCH AND MARKETING MANAGEMENT

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Understand the marketing concepts and its evolution
CO2	Analyze the market based on segmentation, targeting and positioning
CO3	Leverage marketing concepts for decision making on product, price, promotion mix and distribution
CO4	Apply the concepts of market research and analyse data using statistical tools
CO5	Apply internet marketing strategies for businesses

#### 22CB403 OPERATING SYSTEMS

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Implement the various System calls
CO2	Understand the concepts of Processes
CO3	Apply various processor scheduling algorithms and thread mechanism
CO4	Analyse process synchronization and deadlock problems



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CO5	Apply various memory management techniques to given situation
CO6	Apply various file management techniques

### 22CB404 DESIGN AND ANALYSIS OF ALGORITHMS

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Analyse the efficiency of recursive and non-recursive algorithms mathematically
CO2	Analyse the efficiency of brute force, divide and conquer, decrease and conquer, Transform and conquer algorithmic techniques.
CO3	Implement and analyse the problems using dynamic programming and greedy technique algorithmic techniques.
CO4	Solve the problems using iterative improvement technique for optimization.
CO5	Compute the limitations of algorithmic power and solve the problems using backtracking and branch and bound technique.

### 22IT407 WEB DEVELOPMENT FRAMEWORKS

COs	OUTCOMES: Upon completion of the course, students will be able to
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 ReactJshooks.

### 22MA404 OPERATIONS RESEARCH

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Understand the characteristics of different types of decision-making environments
CO2	Use the optimization techniques for use engineering and Businessproblems
CO3	Build and solve Transportation Models and Assignment Models
CO4	Manage inventory control



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CO5 Apply queuing theory for solving real world problems

### 22ME411

### PRODUCT DEVELOPMENT LAB - 4

COs	OUTCOMES: Upon completion of the course, students will be able to
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.

### 22CS411

### APTITUDE AND CODING SKILLS II

COs	OUTCOMES: Upon completion of the course, students will be able to
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.



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### SIXTH SEMESTER

#### 22CB601 FINANCIAL MANAGEMENT

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Understand the fundamental concepts of financial management
CO2	Apply valuation of securities and calculate the risk & return in portfolio management.
CO3	Analyse the cost structure of a company using operating and financial leverages.
CO4	Develop capital budgets and to estimate working capital.
CO5	Apply cash management in business.

#### 22CB602 INFORMATION SECURITY

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Implement of information security and its parameters.
CO2	Implement various access control models and security policies.
CO3	Implement the system design effectively.
CO4	Implement logic-based system design effectively.
CO5	Capable to work with UNIX system calls.
CO6	Student will be able to work with UNIX programming by various methods.

#### 22CB603 ARTIFICIAL INTELLIGENCE

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Demonstrate fundamental understanding of artificial intelligence (AI) and its problem solving techniques.
CO2	Explain how Artificial Intelligence enables capabilities that are beyond conventional technology.
CO3	Implement and execute searching in AI.
CO4	Understand how to represent the knowledge and its approaches.
CO5	Acquaint the Artificial Intelligence techniques for building well-engineered



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and efficient intelligent systems.

### 22CB604 IT WORKSHOP USING SCILAB

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Write fundamental programs in MATLAB, creating variables and mathematical functions.
CO2	Understand how to program matrix operations, array operations and how to solve the system of linear equations.
CO3	Program the fundamentals concepts of basic Plotting consisting of simple and multiple data sets in one plot.
CO4	Understand how to program M-file scripts, M- file functions, Input –output Arguments and program control flow operators, loops, flow structures.
CO5	Use the debugging process and debugging M-files.

### 22CB907 CLOUD, MICROSERVICES AND APPLICATION

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Demonstrate the main concepts of cloud, its characteristics, advantages, key technologies and its various delivery and deployment models.
CO2	Develop and design an application using various tools in cloud environment.
CO3	Acquire the basic and important design concepts and issues of web application development techniques in cloud.
CO4	Structure simple python program for developing an application in cloud.
CO5	Analyze the issue of cloud such as security, energy efficiency and interoperability, and provide an insight into future prospects of computing in the cloud monitoring.

### 22CB911 INTRODUCTION TO FINTECH

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Understand the challenges and opportunities in FinTech industry.
CO2	Describe how Artificial Intelligence, Big Data, Crypto currencies and Block chain is changing the Financial World.



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CO3	Explain the recent developments in digital financial services.
CO4	Analyse the progress of FinTech Regulations.
CO5	Study the future of FinTech Industry.

### 22CS001

### ETHICAL HACKING

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Understand the basics of information security, threats and its attacks.
CO2	Understand the fundamentals of ethical hacking with the hacking methodologies.
CO3	Analyze the phases of the penetration test with the methods.
CO4	Understand the vulnerabilities and use the frameworks to identify vulnerabilities by service scan.
CO5	Understand the web security issues with the fundamentals of OWASP.
CO6	Develop and implement countermeasures against attacks such as SQL injection, DoS, and malware.

### 20CS614

### ADVANCED APTITUDE AND CODING SKILLS - II

COs	OUTCOMES: Upon completion of the course, students will be able to
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.