



# 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 Computer Science and Business Systems

### COURSE OUTCOMES 2023 – 2024 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	22IT403	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	20CB601	Computer Networks + Lab
12	6	20CB602	Information Security + Lab
13	6	20CB603	Artificial Intelligence + Lab
14	6	20CB908	Modern Web Applications + Lab (Professional Elective II)
15	6	20CB910	Modern Enterprise Systems (Professional Elective III)
16	6	20CS614	Advanced Aptitude and Coding Skills – II
17	6	20CB922	Business Intelligence And Analytics
18	6		
19	8	20CB811	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.

### 22IT403 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



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CO4	Manage inventory control
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.

## SIXTH SEMESTER

### 20CB601

### COMPUTER NETWORKS + LAB

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Understand the classification of computer networks, basic layers and its functions, protocols and transmission media in computer networks.
CO2	Examine the performance of different types of networks and techniques for bandwidth utilization.



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CO3	Inspect the functionalities of data link and media access control protocols.
CO4	Examine different routing algorithms.
CO5	Identify appropriate protocol to be used at the transport layer.
CO6	Explain the working of various application layer protocols and network security.

### 20CB602 INFORMATION SECURITY + LAB

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.

### 20CB603 ARTIFICIAL INTELLIGENCE + LAB

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 and efficient intelligent systems.

### 20CB908 MODERN WEB APPLICATIONS + LAB

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Implement various forms of web applications.



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CO2	Implement various features of HTML.
CO3	Implement various features of CSS.
CO4	Implement scripts using java script and HTML.
CO5	Implement front end framework for web pages.
CO6	Implement back-end technologies for web pages.

### 20CB910 MODERN ENTERPRISE SYSTEMS

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Understand basic elements of Enterprise systems.
CO2	Develop skills in understanding architecture and non-functional requirements in developing Enterprise system development and their deployment.
CO3	Understand Enterprise Patterns.
CO4	Develop enterprise applications.
CO5	Understand future trends in Enterprise architectures.

### 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.

### 20CB922 BUSINESS INTELLIGENCE AND ANALYTICS

COs	OUTCOMES: Upon completion of the course, students will be able to
CO1	Understand the business intelligence (BI) methodology and concepts.
CO2	Learn about descriptive, inferential statistics and data warehousing operations.



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<b>CO3</b>	Analyze wide range of applications of data mining.
<b>CO4</b>	Analyze the various prescriptive analytics methods.
<b>CO5</b>	Develop and deploy Business Analytic Models.