R.M.K. ENGINEERING COLLEGE

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

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DEPARTMENT OF INFORMATION TECHNOLOGY

Course Outcomes – Even Semester 2019-2020

Sl. No.	Semester	Theory/Practical	Course Code / Course Name
1)	4	Theory	MA8391-Probability and Statistics
2)	4	Theory	CS8491-Computer Architecture
3)	4	Theory	CS8492-Database Management Systems
4)	4	Theory	CS8451-Design and Analysis of Algorithms
5)	4	Theory	CS8493-Operating Systems
6)	4	Theory	GE8291-Environmental Science and Engineering
7)	4	Practical	CS8481-Database Management Systems Laboratory
8)	4	Practical	CS8461-Operating Systems Laboratory
9)	4	Practical	HS8461-Advanced Reading and Writing
10)	6	Theory	IT8601 – Computational Intelligence
11)	6	Theory	CS8092 – Computer Graphics and Multimedia
12)	6	Theory	IT8602 – Mobile Communication
13)	6	Theory	CS8592 – Object Oriented Analysis and Design
14)	6	Theory	CS8091 – Big Data Analytics
15)	6	Theory	IT8076 – Software Testing
16)	6	Practical	CS8662 – Mobile Application Development Laboratory
17)	6	Practical	CS8582 – Object Oriented Analysis and Design Laboratory
18)	8	Theory	IT6801 – Service Oriented Architecture
19)	8	Theory	GE6075 – Professional Ethics in Engineering
20)	8	Theory	CS6010 – Social Network Analysis
21)	8	Theory	IT6013 – Software Quality Assurance
22)	8	Project	IT6811 – Project Work

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Fourth Semester B.Tech.

MA8391-Probability and Statistics

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Discuss the fundamental probability concepts and random variables.
CO2	Relate the concepts of Standard distributions which can describe real life phenomena.
CO3	Analyze a highly utilized technique.
CO4	Develop the experiments by hypothesis.
CO5	Relate the Concept of Statistical Control System in Real life Situations.
CO6	Solve the distributions and Statistical Concepts in Real life problems

CS8491-Computer Architecture

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Identify the basic organization of computer system and performance of a computer system.
CO2	Utilize the basic instruction set, operations and addressing modes of MIPS architecture.
CO3	Examine the procedure involved in designing ALU
CO4	Compare and Contrast the non-pipelined and pipelined data path implementation of MIPS
CO5	Inspect Parallel Processing challenges, Hardware Multithreading and Multicore architectures
CO6	Examine the performance of Memory and I/O systems.

CS8492-Database Management Systems

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Discuss the fundamental concepts of relational database and SQL
CO2	Use ER model for Relational model mapping to perform database design effectively
CO3	Summarize the properties of transactions and concurrency control mechanisms
CO4	Outline the various storage and optimization techniques
CO5	Compare and contrast various indexing strategies in different database systems
CO6	Explain the different advanced databases

CS8451-Design and Analysis of Algorithms

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Explain the Analysis of Algorithm Efficiency and Compare the Mathematical analysis for Recursive and Non-recursive algorithms
CO2	Identify the efficiency of Brute Force and Divide-And-Conquer technique algorithms.
CO3	Identify the efficiency of Dynamic Programming and Greedy Technique algorithms.

CO4	Solve the problems using Iterative Improvement technique.
CO5	Solve the problems using Backtracking and Branch and Bound Technique.
CO6	Outline the limitations of Algorithm power.

CS8493-Operating Systems

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Explain the overall view of the computer system and operating system.
CO2	Apply various CPU scheduling algorithms, synchronization primitives and deadlock handling methods
CO3	Compare and contrast various memory management schemes and file system functionalities
CO4	Analyze the performance of the various page replacement algorithms and interpret the file system implementation, sharing and protection mechanisms.
CO5	Analyze the performance of the various disk scheduling algorithms
CO6	Demonstrate administrative tasks on Linux servers and to be familiar with the basics of Mobile OS like iOS and Android

GE8291-Environmental Science and Engineering

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Explaining the concepts of different ecosystem and biodiversity present.
CO2	Applying the basic concepts of science and engineering for pollution abatement
CO3	Explaining the different types of natural resources, usage and exploitation
CO4	Implementing scientific, technological, and economic solutions to environmental problems
CO5	Outline on the impact of population on environment

Laboratory

CS8481-Database Management Systems Laboratory

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	To understand data definitions and data manipulation commands
CO2	To learn the use of nested and join queries
CO3	To understand functions, procedures and procedural extensions of data bases
CO4	To be familiar with the use of a frontend tool
CO5	To understand design and implementation of typical database applications

CS8461-Operating Systems Laboratory

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Compare the performance of various CPU Scheduling Algorithms
CO2	Implement Deadlock avoidance and Detection Algorithms
CO3	Create processes and implement IPC

Department of Information Technology
R.M.K. Engineering College
R.S.M. Nagar, Kavaraipettai – 601 206
Website: www.rmkec.ac.in
Phone: 044 67906680

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CO4	Analyze the performance of the various Page Replacement Algorithms
CO5	Implement File Organization and File Allocation Strategies

HS8461-Advanced Reading and Writing

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Write different types of essays.
CO2	Write winning job applications.
CO3	Read and evaluate texts critically.
CO4	Display critical thinking in various professional contexts.

Sixth Semester B.Tech.

IT8601 – Computational Intelligence

COs	Course Outcome: The students, after the completion of the course, are expected to ….
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 supervised, unsupervised and reinforcement learning
CO5	Improve problem solving skills using the acquired knowledge in the areas of, reasoning, natural language understanding and Information retrieval

CS8092 – Computer Graphics and Multimedia

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Discuss about the fundamentals of video display devices and gain knowledge about graphics hardware devices and software used
CO2	Apply two dimensional transformations.
CO3	Apply three dimensional transformations.
CO4	Understand Different types of Multimedia File Format
CO5	Design Basic 3d Scenes using Blende

IT8602 – Mobile Communication

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Summarize the basics of mobile telecommunication system and generations of mobile communication technologies
CO2	Compare various MAC protocols such as TDMA, FDMA and CDMA
CO3	Examine the various mobile telecommunication systems such as GSM, GPRS and UMTS

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CO4	Inspect the architectures of various wireless LAN technologies
CO5	Determine the functionality of network layer and Identify a routing protocol for a given Ad hoc networks
CO6	Summarize the functionality of Transport and Application layer

CS8592 – Object Oriented Analysis and Design

COs	**Course Outcome: The students, after the completion of the course, are expected to ….**
CO1	Gain knowledge in expressing software design with UML diagram
CO2	Design software applications using OO concepts.
CO3	Identify various scenarios based on software requirements
CO4	Transform UML based software design into pattern-based design using design patterns
CO5	Understand the various testing methodologies for OO software

CS8091 – Big Data Analytics

Cos	**Course Outcome: The students, after the completion of the course, are expected to ….**
CO1	Identify big data use cases, characteristics and make use of HDFS and Map-reduce programming model for data analytics
CO2	Examine the data with clustering and classification techniques
CO3	Discover the similarity of huge volume of data with association rule mining and examine recommender system
CO4	Perform analytics on data streams
CO5	Inspect NoSQL database and its management
CO6	Examine the given data with R programming

IT8076 – Software Testing

COs	**Course Outcome: The students, after the completion of the course, are expected to ….**
CO1	Design test cases suitable for a software development for different domains
CO2	Identify suitable tests to be carried out
CO3	Prepare test planning based on the document
CO4	Document test plans and test cases designed
CO5	Use automatic testing tools
CO6	Develop and validate a test plan

CS8662 – Mobile Application Development Laboratory

COs	**Course Outcome: The students, after the completion of the course, are expected to ….**
CO1	Develop mobile applications using GUI and Layouts.
CO2	Develop mobile applications using Event Listener.
CO3	Develop mobile applications using Databases.

CO4	Develop mobile applications using RSS Feed, Internal/External Storage, SMS, Multi- threading and GPS.
CO5	Analyze and discover own mobile app for simple needs.

CS8582 – Object Oriented Analysis and Design Laboratory

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Perform OO analysis and design for a given problem specification
CO2	Identify and map basic software requirements in UML mapping
CO3	Improve the software quality using design patterns and to explain the rationale behind applying specific design patterns
CO4	Test the compliance of the software with the SRS.

Eighth Semester B.Tech.

IT6801 - Service Oriented Architecture

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Be exposed to fundamentals of XML.
CO2	Build applications based on XML.
CO3	Gain knowledge on service-oriented architecture characteristics, layers and benefits.
CO4	Understand the key principles behind SOA.
CO5	Develop web services using technology elements.
CO6	Build SOA-based applications for intra-enterprise and inter-enterprise applications.

GE6075 - Professional Ethics in Engineering

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Create awareness on human values and apply ethics in society.
CO2	To Identify an ethical issue and assess variety of moral issues using ethical theories in engineering.
CO3	To analyze engineering, social experimentation and engineers as responsible experimenters.
CO4	To realize engineer's safety and their responsibilities, professional rights, employee rights, and intellectual property rights.
CO5	To interpret various types of ethics like business ethics, environmental ethics and computer ethics.
CO6	To take part an engineer's as managers, consulting engineers, engineers as expert witness and advisors.

CS6010 - Social Network Analysis

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Examine semantic web related applications
CO2	To illustrate knowledge using ontology.
CO3	Relating mining communities in Web Social Networks

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CO4	Predict human behavior in social web related communities
CO5	Apply and Visualize social networks

IT6013 - Software Quality Assurance

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	Understands the need for software Quality
CO2	Apply the concepts in preparing the quality plan & documents.
CO3	Utilize the concepts in software development life cycle.
CO4	Assess the quality of software product.
CO5	Analyze the software metrics and costs of software quality
CO6	Demonstrate their capability to adopt quality standards.

<u>Laboratory</u>

IT6811 - Project Work

COs	Course Outcome: The students, after the completion of the course, are expected to ….
CO1	On Completion of the project work students will be in a position to take up any challenging practical problems and find solution by formulating proper methodology.