KRUPAJAL ENGINEERING COLLEGE

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

PROGRAMMING FOR PROBLEM SOLVING USING C	
(RPL2B001) (2nd Sem)	
CO1	Introduction to Simple Algorithm for Arithmetic and logical problems and translate into programs.
CO2	Design and implementation of conditional branching, iteration, recursion and divide conquer approach
CO3	Develop programs using array, pointer, matrix addition, multiplication to formulate algorithm and programs
CO4	Develop programs for searching, sorting algorithm and to solve numerical method problems, functions and simple integration

DATA STRUCTURE	
(RCS3C002) (3rd sem)	
CO1	Demonstrate and classify various data structures and their primitive operations
CO2	Apply the concepts of arrays and strings in sorting and pattern matching applications.
CO3	Implement the operations of linear data structures like stacks, queues and linked lists.
CO4	Demonstrate primitive operations on different types of trees and their applications.

OBJECT ORIENTED PROGRAMMING USING JAVA	
(ROP3B001) (3rd Sem)	
CO1	Understand object oriented programming
CO2	Apply fundamental concepts of OOP in JAVA
CO3	To understand inheritance polymorphism abstraction & implement in programmes
CO4	Implement JAVA programs using Java JDK environment

DESIGN AND ANALYSIS OF ALGORITHM	
(RCS4C002) (4th Sem)	
CO1	Analyze the asymptotic performance of algorithms.
CO2	Write rigorous correctness proofs for algorithms.
CO3	Demonstrate a familiarity with major algorithms and data structures.
CO4	Apply important algorithmic design paradigms and methods of analysis. Synthesize efficient algorithms in common engineering design situations

COMPUTER ORGANIZATION & ARCHITECTURE	
(RCS4C003) (4th Sem)	
CO1	How Computer Systems work & the basic principles
CO2	Instruction Level Architecture and Instruction Execution.
CO3	The current state of art in memory system design
CO4	To provide the knowledge on Instruction Level Parallelism and Concepts of advanced pipelining techniques.

DATA COMMUNICATION	
(RCS4D001) (4th Sem)	
CO1	To have a detailed study of various analog and digital modulation and demodulation techniques.
CO2	To have a thorough knowledge of various multiplexing schemes and Data communication protocols.
CO3	To know about the standards and mechanisms of television systems
CO4	Knowledge of working of basic communication systems. Ability to evaluate alternative models of communication system design.

FORMAL LANGUAGES & AUTOMATA THEORY	
(RCS5C001) (5th Sem)	
CO1	To introduce concepts in automata theory and theory of computation
CO2	To identify different formal language classes and their relationships
CO3	To design grammars and recognizers for different formal languages
CO4	Ability to relate practical problems to languages, automata, and computability, mathematical and formal techniques for solving problems.

DATABASE MANAGEMENT SYSTEMS	
(RCS5C002) (5th Sem)	
CO1	Ability to Install, configure, and interact with a relational database management system.
CO2	Ability to master the basics of SQL and construct queries using SQL
CO3	Ability to design and develop a large database with optimal query processing
CO4	To know the fundamental concepts of transaction processing techniques. To understand the internal storage structures in a physical DB design.

OPERATING SYSTEMS	
(RCS5C003) (5th Sem)	
CO1	Identify the functionalities of OS and their categories
CO2	Evaluate multithread techniques and process scheduling algorithms
CO3	Demonstrate suitable techniques for resource management
CO4	Evaluate file system allocation and memory management techniques.

ADVANCED COMPUTER ARCHITECTURE	
(RCS5D001) (5th Sem)	
CO1	Ability to analyze the abstraction of various advanced architecture of a computer
CO2	Ability to analyze the multi-processor architecture & connection mechanism.
CO3	Ability to work out the tradeoffs involved in designing a modern computer system.
CO4	To understand the advance hardware and software issues of computer architecture. Understand multi-processor memory management.
COMPUTER GRAPHICS	
(RCS5D006) (5th Sem)	
CO1	Ability to understand the various computer graphics hardware and display technologies.
CO2	Ability to implement various 2D and 3D objects transformation techniques
CO3	Ability to apply 2D and 3D viewing technologies into the real world applications
CO4	To know 2D raster graphics techniques, 3D modeling, geometric transformations, 3D viewing and rendering. Exploration of fundamental concepts in 2D and 3D computer graphics.

SOFTWARE ENGINEERING	
(RCS6C001) (6th Sem)	
CO1	Ability to relate practical problems to software engineering concepts.
CO2	Ability to model problems using standard software development models.
CO3	Ability to apply software engineering skills in real-world problem solving. Apply, design, implement, verify, validate and maintain software systems with metrics
CO4	To apply software engineering knowledge in real-world problem solving. To identify different software development models.

COMPILER DESIGN	
(RCS6C002) (6th Sem)	
CO1	Ability to learn fundamentals of compiler
CO2	Ability to understand different phases of compiler design.
CO3	Ability to know the details of each phase of compiler design.
CO4	To learn fundamentals of compiler. To know the details of each phase of compiler design.
CLOUD COMPUTING	
(RCS6D003) (6th Sem)	
CO1	Ability to develop the fundamentals of cloud computing
CO2	Ability to understand architecture of cloud
CO3	Ability to comprehend, design, and develop cloud system using some state-of-the-art platform
CO4	To understand the simulation of cloud system using some state-of-the-art platforms and understand the architecture of various cloud.

CYBER LAW & ETHICS	
(RCS7E004) (7th Sem)	
CO1	Ability to identify Cyber attack, classification of mallware, threads, intrusion detection system
CO2	To implement biometric authentication method, information security, network security ,cloud security
CO3	To understand cyber physical system security, block chain technology
CO4	To learn investication methods criminal profiling and cyber trials.

SOFTWARE PROJECT MANAGEMENT	
(RCS7D001) (7th Sem)	
CO1	Ability to relate practical problems to software engineering concepts.
CO2	Ability to model problems using standard software development models.
CO3	Ability to apply software engineering skills in real-world problem solving. Apply, design, implement, verify, validate and maintain software systems with metrics
CO4	To apply software engineering knowledge in real-world problem solving. To identify different software development models.

INTERNET OF THINGS	
(RIT7D001) (7th Sem)	
CO1	Interpret the impact and challenges posed by IoT networks leading to new architectural models.
CO2	Compare and contrast the deployment of smart objects and the technologies to connect them to network.
CO3	Appraise the role of IoT protocols for efficient network communication.
CO4	Elaborate the need for Data Analytics and Security in IoT.