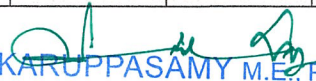




**RVS COLLEGE OF ENGINEERING AND TECHNOLOGY**  
**COIMBATORE – 641 402**  
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**  
**PG-Regulation – 2021**



Course ID	Semester	Course Code	Course Name	Course Outcomes	
C101	I	MA4151	APPLIED PROBABILITY AND STATISTICS FOR COMPUTER SCIENCE ENGINEERS	CO1	Apply the concepts of Linear Algebra to solve practical problems.
				CO2	Use the ideas of probability and random variables in solving engineering problems.
				CO3	Be familiar with some of the commonly encountered two dimensional random variables and be equipped for a possible extension to multivariate analysis.
				CO4	Use statistical tests in testing hypotheses on data.
				CO5	Develop critical thinking based on empirical evidence and the scientific approach to knowledge development.
C102	I	RM4151	RESEARCH METHODOLOGY AND IPR	CO1	Formulate research problem.
				CO2	Analyze literature review and find research gaps to finalize research objectives.
				CO3	Identify the need of ethics in research.
				CO4	Identify the need of IPR of research projects for economic growth and social benefits.
				CO5	Apply basic data analytics techniques: probability distribution, linear regression, ANOVA
C103	I	CP4151	ADVANCED DATA STRUCTURES AND ALGORITHMS	CO1	Design data structures and algorithms to solve computing problems.
				CO2	Choose and implement efficient data structures and apply them to solve problems.
				CO3	Design algorithms using graph structure and various string-matching algorithms to solve real-life problems.

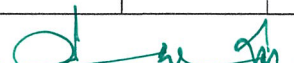
  
Dr. K. KARUPPASAMY M.E., Ph.D.,  
Professor & Head  
Dept. of Computer Science & Engineering  
RVS College of Engg. & Technology  
Coimbatore - 641 402



  
PRINCIPAL  
RVS College of Engineering & Technology  
Coimbatore - 641 402



				<b>C04</b>	Design one's own algorithm for an unknown problem.
				<b>C05</b>	Apply suitable design strategy for problem solving
<b>C104</b>	I	CP4152	DATABASE PRACTICES	<b>C01</b>	Convert the ER-model to relational tables, populate relational databases and formulate SQL queries on data.
				<b>C02</b>	Understand and write well-formed XML documents
				<b>C03</b>	Be able to apply methods and techniques for distributed query processing.
				<b>C04</b>	Design and Implement secure database systems.
				<b>C05</b>	Use the data control, definition, and manipulation languages of the NoSQL databases
<b>C105</b>	I	CP4153	NETWORK TECHNOLOGIES	<b>C01</b>	Explain the concepts of programming language, the general problems and methods related to syntax and semantics.
				<b>C02</b>	Interpret the structured data objects, sub programs and programmer defined data type.
				<b>C03</b>	Outline the sequence control and data control.
				<b>C04</b>	Apply the concepts of storage management using programming languages.
				<b>C05</b>	Implementing the subprogram call and return.
<b>C106</b>	I	CP4154	PRINCIPLES OF PROGRAMMING LANGUAGES	<b>C01</b>	Describe syntax and semantics of programming languages
				<b>C02</b>	Explain data, data types, and basic statements of programming languages
				<b>C03</b>	Design and implement subprogram constructs
				<b>C04</b>	Apply object-oriented, concurrency, and event handling programming constructs
				<b>C05</b>	Develop programs in Scheme, ML, and Prolog
				<b>C06</b>	Understand and adopt new programming language
<b>C107</b>	I	CP4161	ADVANCED	<b>C01</b>	Design and implement basic and advanced data structures

  
**Dr. K. KARUPPASAMY M.E., Ph.D.,**  
 Professor & Head  
 Dept. of Computer Science & Engineering  
 RVS College of Engg. & Technology  
 Coimbatore - 641 402



  
**PRINCIPAL**  
 RVS College of Engineering & Technology  
 Coimbatore - 641 402



			DATA STRUCTURES AND ALGORITHMS LABORATORY		extensively
				<b>CO2</b>	Design algorithms using graph structures
				<b>CO3</b>	Design and develop efficient algorithms with minimum complexity using design techniques
				<b>CO4</b>	Develop programs using various algorithms
				<b>CO5</b>	Choose appropriate data structures and algorithms, understand the ADT/libraries, and use it to design algorithms for a specific problem
<b>C108</b>	II	CP4251	INTERNET OF THINGS	<b>CO1</b>	Understand the various concept of the IoT and their technologies
				<b>CO2</b>	Develop the IoT application using different hardware platforms
				<b>CO3</b>	Implement the various IoT Protocols
				<b>CO4</b>	Understand the basic principles of cloud computing
				<b>CO5</b>	Develop and deploy the IoT application into cloud environment
<b>C109</b>	II	CP4253	MULTICOR E ARCHITECTURE AND PROGRAM MING	<b>CO1</b>	Describe multicore architectures and identify their characteristics and challenges.
				<b>CO2</b>	Identify the issues in programming Parallel Processors.
				<b>CO3</b>	Write programs using Open MP and MPI.
				<b>CO4</b>	Design parallel programming solutions to common problems.
				<b>CO5</b>	Compare and contrast programming for serial processors and programming for parallel
<b>C110</b>	II	CP4252	MACHINE LEARNING	<b>CO1</b>	Understand and outline problems for each type of machine learning
				<b>CO2</b>	Design a Decision tree and Random forest for an application
				<b>CO3</b>	Implement Probabilistic Discriminative and Generative algorithms for an application and analyze the results.


Dr. K. KARUPPASAMY M.E., Ph.D.,  
 Professor & Head  
 Dept. of Computer Science & Engineering  
 RVS College of Engg. & Technology  
 Coimbatore - 641 402



  
**PRINCIPAL**  
 RVS College of Engineering & Technology  
 Coimbatore - 641 402



				<b>C04</b>	Use a tool to implement typical Clustering algorithms for different types of applications.
				<b>C05</b>	Design and implement an HMM for a Sequence Model type of application.
				<b>C06</b>	Identify applications suitable for different types of Machine Learning with suitable justification.
<b>C111</b>	II	SE4151	ADVANCED SOFTWARE ENGINEERING	<b>C01</b>	Identify appropriate process models based on the Project requirements
				<b>C02</b>	Understand the importance of having a good Software Architecture.
				<b>C03</b>	Understand the five important dimensions of dependability, namely, availability, reliability, safety, security, and resilience.
				<b>C04</b>	Understand the basic notions of a web service, web service standards, and service-oriented
				<b>C05</b>	Be familiar with various levels of Software testing
<b>C113-E2</b>	II	CP4212	SOFTWARE ENGINEERING LAB	<b>C01</b>	Can produce the requirements and use cases the client wants for the software being Produced.
				<b>C02</b>	Participate in drawing up the project plan. The plan will include at least extent and work assessments of the project, the schedule, available resources, and risk management can model and specify the requirements of mid-range software and their architecture.
				<b>C03</b>	Create and specify such a software design based on the requirement specification that the software can be implemented based on the design.
				<b>C04</b>	Can assess the extent and costs of a project with the help of several different assessment methods.
<b>C114-E2</b>	III	CP4351	SECURITY PRACTICES	<b>C01</b>	Understand the core fundamentals of system security
				<b>C02</b>	Apply the security concepts to wired and wireless networks
				<b>C03</b>	Implement and Manage the security essentials in IT Sector


  
**Dr. K. KARUPPASAMY M.E., Ph.D.,**  
 Professor & Head  
 Dept. of Computer Science & Engineering  
 RVS College of Engg. & Technology  
 Coimbatore - 641 402



  
**PRINCIPAL**  
 RVS College of Engineering & Technology  
 Coimbatore - 641 402



				<b>C04</b>	Explain the concepts of Cyber Security and Cyber forensics
				<b>C05</b>	Be aware of Privacy and Storage security Issues.
<b>C115-E2</b>	II-E-1	MP4073	HUMAN COMPUTER INTERACTION	<b>C01</b>	Understand the basics of human computer interactions via usability engineering and cognitive modeling.
				<b>C02</b>	Understand the basic design paradigms, complex interaction styles.
				<b>C03</b>	Understand the models and theories for user interaction
				<b>C04</b>	Examine the evaluation of interaction designs and implementations.
				<b>C05</b>	Elaborate the above issues for web and mobile applications.
<b>C201-E</b>	II-E-1	MP4253	CLOUD COMPUTING TECHNOLOGIES	<b>C01</b>	Employ the concepts of virtualization in the cloud computing
				<b>C02</b>	Identify the architecture, infrastructure and delivery models of cloud computing
				<b>C03</b>	Develop the Cloud Application in AWS platform
				<b>C04</b>	Apply the concepts of Windows Azure to design Cloud Application
				<b>C05</b>	Develop services using various Cloud computing programming models.
<b>C202-E</b>	II-E-1	BD4151	FOUNDATIONS OF DATA SCIENCE	<b>C01</b>	Obtain, clean/process and transform data.
				<b>C02</b>	Analyze and interpret data using an ethically responsible approach.
				<b>C03</b>	CO3: Use appropriate models of analysis, assess the quality of input, derive insight from results, and investigate potential issues.
				<b>C04</b>	Apply computing theory, languages and algorithms, as well as mathematical and statistical models, and the principles of optimization to appropriately formulate and use data analyses.
				<b>C05</b>	Formulate and use appropriate models of data analysis to solve business-related

  
**Dr. K. KARUPPASAMY M.E., Ph.D.,**  
 Professor & Head  
 Dept. of Computer Science & Engineering  
 RVS College of Engg. & Technology  
 Coimbatore - 641 402



  
**PRINCIPAL**  
 RVS College of Engineering & Technology  
 Coimbatore - 641 402



					challenges.
<b>C203-E</b>	II-E-1	MP4152	WIRELESS COMMUNICATIONS	<b>CO1</b>	Design solutions for cellular communication
				<b>CO2</b>	Determine the capacity of wireless channels
				<b>CO3</b>	Analyze the performance of the digital modulation techniques in fading channels
				<b>CO4</b>	Apply various diversity techniques in wireless communication
				<b>CO5</b>	Design multicarrier systems in wireless communication
<b>C204</b>	II-E-1	SE4071	AGILE TECHNOLOGIES	<b>CO1</b>	Analyze existing problems with the team, development process and wider organization
				<b>CO2</b>	Apply a thorough understanding of Agile principles and specific practices
				<b>CO3</b>	Select the most appropriate way to improve results for a specific circumstance or need
				<b>CO4</b>	Judge and craft appropriate adaptations to existing practices or processes depending upon analysis of typical problems
				<b>CO5</b>	Evaluate likely successes and formulate plans to manage likely risks or problems
<b>C205</b>	II-E-1	CP4078	PERFORMANCE ANALYSIS OF COMPUTER SYSTEMS	<b>CO1</b>	Identify the need for performance evaluation and the metrics used for it
				<b>CO2</b>	Distinguish between open and closed queuing networks
				<b>CO3</b>	Apply Little'e law and other operational laws to open and closed systems
				<b>CO4</b>	Use discrete-time and continuous-time Markov chains to model real world systems
				<b>CO5</b>	Develop analytical techniques for evaluating scheduling policies
<b>C205</b>	II-E-1	CP4001	ADVANCED OPERATING SYSTEM	<b>CO1</b>	Understand and explore the working of Theoretical Foundations of OS.
				<b>CO2</b>	Analyze the working principles of Distributed Deadlock Detection and resource

Dr. K. KARUPPASAMY M.E., Ph.D.,  
 Professor & Head  
 Dept. of Computer Science & Engineering  
 RVS College of Engg. & Technology  
 Coimbatore - 641 402



**PRINCIPAL**  
 RVS College of Engineering & Technology  
 Coimbatore - 641 402



					management
				C03	Understand the concepts of distributed shared memory and scheduling mechanisms
				C04	Understand and analyze the working of Data security
				C05	Apply the learning into multiprocessor system architectures.
C205	II-E-1	MU4251	DIGITAL IMAGE PROCESSING	C01	Apply knowledge of Mathematics for image processing operations
				C02	Apply techniques for image restoration.
				C03	Identify and extract salient features of images.
				C04	Apply the appropriate tools (Contemporary) for image compression and analysis.
				C05	Apply segmentation techniques and do object recognition.
C205	II-E-2	BD4071	HIGH PERFORMANCE COMPUTING FOR BIG DATA	C01	Understand the basics concepts of High Performance computing systems.
				C02	Apply the concepts of network and software infrastructure for high performance computing
				C03	Use real time analytics using high performance computing.
				C04	Apply the security models and big data applications in high performance computing
				C05	Understand the emerging big data applications.
C205	II-E-2	CP4076	INFORMATION RETRIEVAL TECHNIQUES	C01	Build an Information Retrieval system using the available tools.
				C02	Identify and design the various components of an Information Retrieval system.
				C03	Categorize the different types of IR Models.
				C04	Apply machine learning techniques to text classification and clustering which is used for efficient Information Retrieval.
				C05	Design an efficient search engine and analyze the Web content structure.

  
 Dr. K. KARUPPASAMY M.E., Ph.D.,  
 Professor & Head  
 Dept. of Computer Science & Engineering  
 RVS College of Engg. & Technology  
 Coimbatore - 641 402

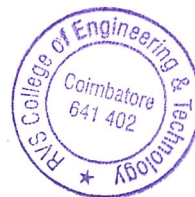



  
 PRINCIPAL  
 RVS College of Engineering & Technology  
 Coimbatore - 641 402



C205	II-E-2	CP4079	SOFTWARE QUALITY ASSURANCE	C01	Utilize the concepts of SQA in software development life cycle
				C02	Demonstrate their capability to adopt quality standards.
				C03	Assess the quality of software products.
				C04	Apply the concepts in preparing the quality plan & documents.
				C05	Ensure whether the product meets company's quality standards and client's
C205	II-E-2	CP4071	AUTONOMOUS SYSTEMS	C01	Understand architecture and modeling of autonomous systems.
				C02	Employ localization mapping techniques for autonomous systems
				C03	Design solutions for autonomous systems control.
				C04	Analyze Robot Transformations, Sensors and Cell Design
				C05	Explain the working principles of Micro/Nano Robotic system
C205	II-E-2	CP4081	WEB ANALYTICS	C01	Understand the Web analytics platform, and their evolution.
				C02	Use the various Data Streams Data.
				C03	Know how the survey of capturing of data will benefit.
				C04	Understand Common metrics of web as well as KPI related concepts.
				C05	Apply various Web analytics versions in existence.
C205	II-E-2	MP4071	COGNITIVE COMPUTING	C01	Explain applications in Cognitive Computing.
				C02	Describe Natural language processor role in Cognitive computing.
				C03	Explain future directions of Cognitive Computing
				C04	Evaluate the process of taking a product to market
				C05	Comprehend the applications involved in this domain.

Dr. K. KARUPPASAMY M.E., Ph.D.,  
Professor & Head  
Dept. of Computer Science & Engineering  
RVS College of Engg. & Technology  
Coimbatore - 641 402



  
PRINCIPAL  
RVS College of Engineering & Technology  
Coimbatore - 641 402



C205	II-E-2	AP4075	QUANTUM COMPUTING	C01	Understand the basic principles of quantum computing.
				C02	Gain knowledge of the fundamental differences between conventional computing and quantum computing.
				C03	Understand several basic quantum computing algorithms.
				C04	Understand the classes of problems that can be expected to be solved well by quantum
C205	II-E-2	BD4251	BIG DATA MINING AND ANALYTICS	C01	Design algorithms by employing Map Reduce technique for solving Big Data problems.
				C02	Design algorithms for Big Data by deciding on the apt Features set .
				C03	Design algorithms for handling petabytes of datasets
				C04	Design algorithms and propose solutions for Big Data by optimizing main memory consumption
				C05	Design solutions for problems in Big Data by suggesting appropriate clustering techniques.
	III-E-3	CP4077	MOBILE AND PERVASIVE COMPUTING	C01	Design a basic architecture for a pervasive computing environment
				C02	Design and allocate the resources on the 3G-4G wireless networks
				C03	Analyze the role of sensors in Wireless networks
				C04	Work out the routing in mesh network
				C05	Deploy the location and context information for application development
				C06	Develop mobile computing applications based on the paradigm of context aware computing and wearable computing

  
 Dr. K. KARUPPASAMY M.E., Ph.D.,  
 Professor & Head  
 Dept. of Computer Science & Engineering  
 RVS College of Engg. & Technology  
 Coimbatore - 641 402



  
 PRINCIPAL  
 RVS College of Engineering & Technology  
 Coimbatore - 641 402