



R.M.K. ENGINEERING COLLEGE

(An Autonomous Institution)

(Affiliated to Anna University, Chennai / Approved by AICTE, New Delhi
Accredited by NAAC with A+ Grade / ISO 9001:2015 Certified Institution
All the Eligible UG Programs are Accredited by NBA, New Delhi.)
RSM Nagar, Kavaraipettai – 601 206.



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

COURSE OUTCOMES

ACADEMIC YEAR 2025-26 ODD DEMESTER

S.No	SEMESTER	COURSE CODE	COURSE NAME
1	3	24EE301	Circuit Theory
2		24EE302	Electronic Devices
3		24GE301	Universal Human Values - II (Understanding Harmony)
4		24MA304	Fourier Analysis and Partial Differential Equation
5		24CS303	Database Management Systems
6		24CS302	Advanced Java Programming
7	5	22EE501	Microcontroller and ARM Processor
8		22EE502	Conventional and Renewable Energy Systems
9		22EE503	Power System Analysis
10		22EE504	Embedded Systems and IoT
11		22EE911	Computer Architecture (PE II)
12		22CB005	Design Thinking (OE I)
13	7	22CE701	Professional Ethics
14		22EE913	System Programming
15		22EE921	Smart Grid System
16		22AI002	Soft Computing
17		22CB004	Fundamentals of Management



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COURSE CODE	COURSE NAME	COURSE OUTCOMES
24EE301	Circuit Theory	CO1: Apply the knowledge of various mathematical concepts, basic circuit laws and to simplify the dc and ac networks using reduction techniques. CO2: Analyse and verify the various network theorems to determine behavior of the given circuit. CO3: Design and simulate resonance and coupled circuits. CO4: Comprehend the mathematical expression for voltages and currents in RL, RC and RLC circuits to find the transient response of inductor and capacitor in dc circuits. CO5: Analyse the three phase power circuits with different types of load arrangements
24EE302	Electronic Devices	CO 1: Design and analyse simple rectifiers and voltage regulators using diodes. CO 2: Compare the behaviour of BJT under different configurations. CO 3: Interpret the characteristics and applications of FET and MOSFET. CO 4: Design and analyse feedback amplifiers and oscillators. CO 5: Assess various pulse circuits using different semiconductor devices.
24GE301	Universal Human Values – II (Understanding Harmony)	CO1: Be aware of themselves, and their surroundings (family, society, nature). CO2: Be more responsible in life, and in handling problems with sustainable solutions, while keeping human relationships and human nature in mind. CO3: Have better critical ability. CO4: Become sensitive to their commitment towards human values, human relationships, and human society. CO5: Apply what they have learnt to their own self in different day-to-day settings in real life.
24MA304	Fourier Analysis and Partial Differential Equation	CO1: Obtain the Fourier series of periodic functions. CO2: Analyze the harmonics using Fourier series. CO3: Compute the Fourier transform of prescribed functions. CO4: solve first order partial differential equations. CO5: solve higher order partial differential equations. CO6: Apply the concept of Fourier series to solve heat and wave equations.
24CS303	Database Management Systems	CO1: Map ER model to Relational model to perform database design effectively. CO2: Implement SQL and effective relational database design concepts. CO3: Apply relational algebra, calculus and normalization techniques in database design. CO4: Understand the concepts of transaction processing, concurrency control, recovery procedure and data storage techniques.



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		<p>CO5: Evaluate and implement transaction processing, concurrency control mechanisms, and recovery procedures to maintain data integrity.</p> <p>CO6: Analyze and optimize database queries and understand the features and applications of advanced and distributed database systems, including NoSQL.</p>
24CS302	Advanced Java Programming	<p>CO1: Utilize the Java Collections Framework to solve complex data structure problems.</p> <p>CO2 Demonstrate proficiency in Java I/O operations and manage data efficiently.</p> <p>CO3: Learn to utilize the Stream API for complex data processing by applying functional programming techniques.</p> <p>CO4: Understand and implement advanced object serialization techniques.</p> <p>CO5: Effectively use regular expressions for advanced text processing tasks.</p> <p>CO6: Build simple applications using advanced java programming concepts.</p>
22EE501	Microcontroller and ARM Processor	<p>CO1: Apply the basic concepts of and utilizing IDEs tailored for microcontrollers and microprocessors.</p> <p>CO2: Illustrate/Acquire skills in the interfacing of different peripherals with Microprocessor.</p> <p>CO3: Understand the features, architecture, and integration of external devices of ARM based embedded system.</p> <p>CO4: Analyse the instruction set and development tools of ARM for a computerbased system/Develop the software applications for ARM based embedded systems.</p> <p>CO5: Describe the architecture of ARM Cortex and OMAP.</p>
22EE502	Conventional and Renewable Energy Systems	<p>CO1: Have a solid understanding of conventional and renewable energy sources and technologies.</p> <p>CO2: Deal with various issues associated with wind energy generation and operation.</p> <p>CO3: Handle various issues related to performance improvement of solar energy harnessing.</p> <p>CO4: Develop good understanding of biomass and geothermal energy principles and operation.</p> <p>CO5: Propose an appropriate renewable energy system for a given application.</p>
22EE503	Power System Analysis	<p>CO1: Model the power system under steady state operating conditions.</p> <p>CO2: Apply numerical methods to solve the power flow problem.</p> <p>CO3: Model and analyze the system under balanced fault condition.</p> <p>CO4: Model and analyze the system under unbalanced fault condition.</p> <p>CO5: Classify the power system stability and analyze the transient behaviour of power</p>



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		system.
22EE504	Embedded Systems and IoT	CO1: Understand hardware and software requirements in embedded systems. CO2: Develop embedded C programs for real time applications. CO3: Learn the development smart system solutions and analyze issues. CO4: Understand the types of communication model in IoT. CO5: Design portable IoT using Raspberry Pi / open platform. CO6: Analyze applications of IoT in real time scenario.
22EE911	Computer Architecture (PE II)	CO1: Explain the basic principles and operations of digital computers. CO2: Design arithmetic and Logic Unit for various fixed- and floating-Point operations. CO3: Construct Pipeline architectures. CO4: Apply the concept of Interrupt and Exception handling. CO5: Recognize parallel processor and multiprocessor architectures.
22CB005	Design Thinking (OE I)	CO1: Understand the phases of design thinking process CO2: Conduct an immersion activity to create an empathy map CO3: Define the key problems of the personas created. CO4: Apply the ideation phase steps to present the prototype ideas CO5: Create a prototype with value propositions and test the prototype
22CE701	Professional Ethics	CO1: Summarize the importance of human values in work place. CO2: Discuss the senses of engineering ethics, moral dilemmas, moral autonomy and uses of ethical theories. CO3: Describe the role of engineers as responsible experimenters and necessity of codes of ethics in engineering. CO4: Explain safety, risk, responsibilities and rights in the society. CO5: Analyze the global issues related to environmental ethics, computer ethics, weapons development and the role of engineers as expert witnesses and advisors. CO6: Apply ethics in society and discuss the ethical issues related to engineering.
22EE913	System Programming	CO1: Write System programs in Linux environment. CO2: Design and implement simple system projects. CO3: Perform advanced C programming using linked list, Function pointers, arrays, sorting. CO4: Demonstrate various debugging techniques. CO5: Design simple Embedded system projects.
22EE921	Smart Grid System	CO1: Understanding on the concepts of Smart Grid and its present developments. CO2: Study about different Smart Grid technologies. CO3: Acquire knowledge about different smart meters and advanced metering infrastructure.



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		CO4: Have knowledge on power quality management in Smart Grids CO5: Develop more understanding on LAN, WAN and Cloud Computing for Smart Grid applications
22AI002	Soft Computing	CO1: Elaborate the basic concepts of Soft Computing. CO2: Discuss Artificial neural networks and its applications. CO3: Apply Fuzzy logic to solve different applications. CO4: Solving problems using Genetic algorithms. CO5: Discuss various algorithms in soft computing with its applications and limitations. CO6: Use various algorithms in soft computing to solve real-world problems.
22CB004	Fundamentals of Management	CO1: Understand the theories, concept, and evolution of management. CO2: Demonstrate the ability to employ 'the management way of thinking'. CO3: Understand how organizations work and find it easier to grasp the intricacies of other management areas such as finance, marketing, strategy etc. CO4: Understand the qualities of a leader in the managerial aspect in future terms. CO5: Understand the managerial ethics and CSR and its importance.