Department of Computer Engineering
Course Outcomes

Course Name:-	Discrete Mathematics
Course Code:-	**210241**
At the end of course, students will be able to-	
CO1:-	Formulate problems precisely, solve the problems, apply formal proof techniques, and explain the reasoning clearly.
CO2:-	Apply appropriate mathematical concepts and skills to solve problems in both familiar and unfamiliar situations including those in real-life contexts.
CO3:-	Design and analyze real world engineering problems by applying set theory, propositional logic and to construct proofs using mathematical induction.
CO4:-	Specify, manipulate and apply equivalence relations; construct and use functions and apply these concepts to solve new problems
CO5:-	Calculate numbers of possible outcomes using permutations and combinations; to model and analyze computational processes using combinatorics.
CO6:-	Analyze the properties of binary operations, apply abstract algebra in coding theory and evaluate the algebraic structures.

Course Name:-	Foundamental of Data Structure
Course Code:-	**210242**
At the end of course, students will be able to-	
CO1:-	Design the algorithms to solve the programming problems, identify appropriate algorithmic strategy for specific application, and analyze the time and space complexity.
CO2:-	Discriminate the usage of various structures, Design/Program/Implement the appropriate data structures; use them in implementations of abstract data types and Identity the appropriate data structure in approaching the problem solution.
CO3:-	Demonstrate use of sequential data structures- Array and Linked lists to store and process data.
CO4:-	Understand the computational efficiency of the principal algorithms for searching and sorting and choose the most efficient one for the application.
CO5:-	Compare and contrast different implementations of data structures (dynamic and static).
CO6:-	Understand, Implement and apply principles of data structures-stack and queue to solve

Course Name:-	Object Oriented Programming
Course Code:-	**210243**
At the end of course, students will be able to-	
CO1:-	Apply constructs- sequence, selection and iteration; classes and objects, inheritance, use of predefined classes from libraries while developing software.
CO2:-	Design object-oriented solutions for small systems involving multiple objects.
CO3:-	Use virtual and pure virtual function and complex programming situations.
CO4:-	Apply object-oriented software principles in problem solving
CO5:-	Analyze the strengths of object-oriented programming.
CO6:-	Develop the application using object oriented programming language(C++).

Course Name:-	Computer Graphics
Course Code:-	**210244**
At the end of course, students will be able to-	
CO1:-	Identify the basic terminologies of Computer Graphics and interpret the mathematical foundation of the concepts of computer graphics.
CO2:-	Apply mathematics to develop Computer programs for elementary graphic operations
CO3:-	Illustrate the concepts of windowing and clipping and apply various algorithms to fill and clip polygons
CO4:-	Understand and apply the core concepts of computer graphics, including transformation in two and three dimensions, viewing and projection
CO5:-	Understand the concepts of color models, lighting, shading models and hidden surface elimination
CO6:-	Create effective programs using concepts of curves, fractals, animation and gaming

Course Name:-	Digital Electronics & Logic Design
Course Code:-	**210245**
At the end of course, students will be able to-	
CO1:-	Simplify Boolean Expressions using K Map
CO2:-	Design and implement combinational circuits

CO3:-	Design and implement sequential circuits
CO4:-	Develop simple real-world application using ASM and PLD
CO5:-	Differentiate and Choose appropriate logic families IC packages as per the given design specifications
CO6:-	Explain organization and architecture of computer system
Course Name:-	Humanity and Social Science
Course Code:-	**210250**
At the end of course, students will be able to-	
CO1:-	Aware of the various issues concerning humans and society
CO2:-	Aware about their responsibilities towards society
CO3:-	Sensitized about broader issues regarding the social, cultural, economic and human aspects, involved in social changes
CO4:-	Able to understand the nature of the individual and the relationship between self and the community
CO5:-	Able to understand major ideas, values, beliefs, and experiences that have shaped human history and cultures
Course Name:-	: Audit Course 3 (Smart Cities)
Course Code:-	**210251**
At the end of course, students will be able to-	
CO1:-	Understand the dynamic behavior of the urban system by going beyond the physical appearance and by focusing on representations, properties and impact factors
CO2:-	Explore the city as the most complex human-made organism with a metabolism that can be modeled in terms of stocks and flows
CO3:-	Knowledge about data-informed approaches for the development of the future city, based on crowd sourcing and sensing
CO4:-	Knowledge about the latest research results in for the development and management of future cities
CO5:-	Understand how citizens can benefit from data-informed design to develop smart and responsive cities

SEMESTER-II	
Course Name:-	Engineering Mathematics-III
Course Code:-	**-207003**
At the end of course, students will be able to-	
CO1:-	Solve higher order linear differential equation using appropriate techniques for analyzing electrical circuits.
CO2:-	Solve problems related to Fourier transform, Z-Transform and applications to Signal and Image processing.
CO3:-	Apply statistical methods like correlation, regression analysis and probability theory for analysis and prediction of a given data
CO4:-	Solve algebraic and transcendental equations and system of linear equations using numerical techniques.
CO5:-	Obtain interpolating polynomials, numerical differentiation and integration, numerical solutions of ordinary differential equations used in modern scientific computing.
Course Name:-	Data Structures & Algorithms
Course Code:-	**210256**
At the end of course, students will be able to-	
CO1:-	Identify and articulate the complexity goals and benefits of a good hashing scheme for real- world applications.
CO2:-	Apply non-linear data structures for solving problems of various domain.
CO3:-	Design and specify the operations of a nonlinear-based abstract data type and implement them in a high-level programming language.
CO4:-	Analyze the algorithmic solutions for resource requirements and optimization
CO5:-	Use efficient indexing methods and multiway search techniques to store and maintain data.
CO6:-	Use appropriate modern tools to understand and analyze the functionalities confined to the secondary storage.
Course Name:-	Software Engineering
Course Code:-	**210253**
At the end of course, students will be able to-	
CO1:-	Analyze software requirements and formulate design solution for a software
CO2:-	Design applicable solutions in one or more application domains using software engineering approaches that integrate ethical, social, legal and economic concerns
CO3:-	Apply new software models, techniques and technologies to bring out innovative and novelistic solutions for the growth of the
CO4:-	Model and design User interface and component-level
CO5:-	Identify and handle risk management and software configuration management
CO6:-	Utilize knowledge of software testing approaches, approaches to verification and validation
	Construct software of high quality – software that is reliable, and that is reasonably easy to understand, modify and maintain efficient,

Course Name:-	Microprocessor
Course Code:-	**210254**
At the end of course, students will be able to-	

CO1:-	Exhibit skill of assembly language programming for the application.
CO2:-	Classify Processor architectures
CO3:-	Illustrate advanced features of 80386 Microprocessor.
CO4:-	Compare and contrast different processor modes.
CO5:-	Use interrupts mechanism in applications
CO6:-	Differentiate between Microprocessors and Microcontrollers
	Identify and analyze the tools and techniques used to design, implement, and debug microprocessor-based systems

Course Name:-	Principles of Programming Languages
Course Code:-	**210255**
At the end of course, students will be able to-	

CO1:-	Make use of basic principles of programming languages
CO2:-	Able to develop a program with Data representation and Computations
CO3:-	Able to develop programs using Object Oriented Programming language : Java
CO4:-	Develop application using inheritance, encapsulation, and polymorphism
CO5:-	Able to demonstrate Applet and Multithreading for robust application development
CO6:-	Able to develop a simple program using basic concepts of Functional and Logical programming paradigm

Course Name:-	Code of Conduct
Course Code:-	**210259**
At the end of course, students will be able to-	

CO1:-	Understand the basic perception of profession, professional ethics, various moral and social issues, industrial standards, code of ethics and role of professional ethics in engineering field
CO2:-	Aware of professional rights and responsibilities of an engineer, responsibilities of an engineer for safety and risk benefit analysis
CO3:-	Understand the impact of the professional Engineering solutions in societal and Environmental contexts, and demonstrate the knowledge of, and need for sustainable development
CO4:-	Acquire knowledge about various roles of engineers in variety of global issues and able to apply ethical principles to resolve situations that arise in their professional lives

Course Name:-	Audit Course-4 (Yoga and Meditation)
Course Code:-	**210260**
At the end of course, students will be able to-	

CO1:-	Understand philosophy and religion as well as daily life issues will be challenged and enhanced.
CO2:-	CO2: Enhances the immune system.
CO3:-	CO3: Intellectual and philosophical understanding of the theory of yoga and basic related Hindu scriptures will be developed.
CO4:-	CO4: Powers of concentration, focus, and awareness will be heightened.