AMRUTVAHINI COLLEGE OF ENGINEERING, SANGAMNER

Department Of Information Technology

Course Outcomes

SE 2024 Pattern			
Course Code	**Course Name**	**Course Outcomes**	
Semester I			
PCC-201-ITT	Data Structures & Algorithms	CO 1	To Perform basic analysis of algorithms with respect to time and space complexity.
		CO 2	To apply appropriate data structures to implement stack and queue.
		CO 3	To design and specify the operations of a nonlinear-based abstract data type and implement them in a high-level programming language.
		CO 4	Design different hashing functions
		CO 5	To Solve real-life optimization problems using Divide and Conquer, Greedy, and Dynamic Programming strategies.
PCC-202-ITT	Object Oriented Programming	CO 1	Understand OOP concepts like classes, objects, inheritance, and polymorphism.
		CO 2	Use methods, constructors, and memory management.
		CO 3	Apply inheritance and polymorphism for code reuse.
		CO 4	Handle exceptions and use generics with collections.
		CO 5	Perform file handling and implement basic design patterns.
PCC-203-ITT	Basics of Computer Network	CO 1	Student will able to learn about the principles of data communication and network components.
		CO 2	Student will able to learn about how computer networks are organized with the concept of layered approach
		CO 3	Student will able to learn about how signals are used to transfer data between nodes.
		CO 4	Student will able to learn about how packets in the Internet are delivered.
		CO 5	Student will able to learn about how routing protocols work
		CO 6	Student will able to learn about applications of OSI/TCP-IP Model

PCC-204-ITT	Data Structures & Algorithms Lab	CO 1	To perform basic analysis of algorithms with respect to time and space complexity.
		CO 2	To apply appropriate data structures to implement stack and queue.
		CO 3	To design and specify the operations of a nonlinear-based abstract data type and implement them in a high-level programming language.
		CO 4	Design different hashing functions
		CO 5	To Solve real-life optimization problems using Divide and Conquer, Greedy, and Dynamic Programming strategies
PCC-205-ITT	Object Oriented Programming Lab	CO 1	Apply fundamental constructs like control statements, for implementing an application.
		CO 2	Implement java programs using, class, objects, constructors in Java, arrays, managing I/O
		CO 3	Apply object-oriented features like Inheritance, Polymorphism, Dynamic binding for implementing an application.
		CO 4	Apply concepts of exception handling, multi-threading for implementing an application.
MDM-221-ITT	Digital Electronics and Logic Design	CO 1	Perform Binary Arithmetic and Logical Operations and code conversions
		CO 2	Design and Implement Combinational Circuits.
		CO 3	Differentiate combinational and sequential circuits and use flip flops for various applications
		CO 4	Design and Implement Sequential Circuits.
		CO 5	Explain Organization and Architecture of Computer systems
EEM-231-ITT	Principles of Management & Entrepreneurship	CO 1	Articulate core management functions, planning, and decision-making.
		CO 2	Analyze organizational structure, staffing, and leadership in tech teams.
		CO 3	Explain motivation and control systems in management.
		CO 4	Demonstrate understanding of entrepreneurship and its development.
		CO 5	Evaluate small-scale industries, support agencies, project reporting, and industrial ownership.
VEC-232-ITT	Universal Human Values And Professional Ethics	CO 1	Understand the significance of universal human values and ethical human conduct.
		CO 2	Apply the concepts of harmony in self and

			relationships in real-life scenarios.
		CO 3	Evaluate the interconnection between individual, society, and nature from a holistic perspective.
		CO 4	Develop commitment to self-exploration, self-regulation, and social responsibility.
CEF-241-ITT	Community Engagement Project	CO 1	Apply their engineering knowledge to analyze communities' need based on real-world environmental problems.
		CO 2	Design real-world applications by considering suitable requirements.
		CO 3	Implement real-world applications using suitable tools and technology.
		CO 4	Work in a team with individual contributions to the development of the project.
		CO 5	Communicate and demonstrate technical information effectively through project reports, presentations, and interactions with community members and mentors.
Semester II			
PCC-251- ITT	Database Management System	CO 1	Explain the fundamental concepts, architecture, and functionalities of database management systems.
		CO 2	Analyze and design relational database (RDBMS) model to represent real-world database applications and demonstrate RDBMS principles.
		CO 3	Improve the database design through normalization.
		CO 4	Formulate database queries using SQL and PL/ SQL for efficient data retrieval and manipulation.
		CO 5	Demonstrate ACID properties for transaction management and describe concurrency control protocols.
		CO 6	Explore and discuss recent trends in database technologies.
PCC-252- ITT	Computer Graphics	CO 1	Define fundamental concepts and identify hardware components in computer graphics.
		CO 2	Apply algorithms to draw and fill basic geometric shapes
		CO 3	Apply mathematical transformations and projections techniques on graphical objects.
		CO 4	Implement techniques for polygon filling, clipping, and color modeling.

		CO 5	Develop interactive graphics and animations.
PCC-253-ITT	Probability & Staatistics	CO 1	Apply probability theory to model uncertain systems and events.
		CO 2	Analyze and interpret various probability distributions
		CO 3	Use moment generating functions and inequalities (Markov and Chebyshev) to analyze random variables
		CO 4	Apply population parameters using sampling and construct confidence intervals.
		CO 5	Conduct statistical hypothesis tests to support decision-making
PCC-254-ITT	Database Management System Lab	CO 1	To analyze database models and entity relationship models.
		CO 2	To understand the relational database systems.
		CO 3	To design and implement a database schema for a given problem-domain.
		CO 4	To populate and query a database using SQL DDL and DML commands.
		CO 5	To implement PL/SQL including stored procedures, stored functions and triggers.
		CO 6	To design a backend database of any one organization: CASE STUDY.
PCC-255-ITT	Computer Graphics Lab	CO 1	Apply line& circle drawing algorithms to draw the objects.
		CO 2	Apply polygon filling methods for the object.
		CO 3	Apply polygon clipping algorithms for the object.
		CO 4	Apply the 2D transformations on the object.
		CO 5	Implement the curve generation algorithms.
		CO 6	Demonstrate the animation of any object using animation principles.
MDM-271-ITT	Processor Architecture	CO 1	Apprehend the fundamentals of PIC Microcontroller
		CO 2	Students will be able to analyze the difference between microprocessor and microcontroller-based systems.
		CO 3	Apply embedded C programming to configure and control I/O ports, and implement timer-based applications using polling and interrupt techniques on PIC18 microcontrollers.

		CO 4	Interface and program external devices with a PIC microcontroller to design functional embedded system solutions.
		CO 5	Analyze architectural details of ARM processor and apprehend the current trends in Processor Architecture
VSE- 281-ITT	Digital Marketing and social media	CO 1	Understand the core concepts of Digital Marketing.
		CO 2	Understand the basics of Emil & Mobile Marketing.
		CO 3	Use Search Engine Optimization tools for digital marketing campaigns
		CO 4	Use social media marketing tools for digital marketing campaigns.
		CO 5	Apply digital marketing strategies using Mailchimp and WordPress.
		CO 6	Apply strategic digital advertising techniques through Google Ads, create visually compelling graphics with Canva, and produce engaging video content on YouTube
EEM-283-ITT	E-Commerce	CO 1	Understand core concepts, scope, features, types, and models of E-Commerce, and compare them with traditional commerce.
		CO 2	Understand the technological infrastructure required for E-Commerce, including hardware, software, payment systems, cloud services, and monitoring tools.
		CO 3	Analyze the structure and functionality of various E-Commerce payment systems, and evaluate security protocols and legal aspects involved in online transactions.
		CO 4	Apply digital marketing techniques, web selling models, and pricing strategies to create an effective online presence and customer engagement.
		CO 5	Develop E-Business models by understanding their elements, evolution, and the implementation of internet-based solutions.
		CO 6	Identify key security threats in E-Commerce and recommend appropriate cryptographic, authentication, and data protection mechanisms.
VEC-284-ITT	Environmental Studies	CO 1	Demonstrate an integrative approach to environmental issues with a focus on sustainability.
		CO 2	Explain and identify the role of the organism in

			energy transfers in different ecosystems.
		CO 3	Distinguish between and provide examples of renewable and nonrenewable resources & analyze personal consumption of resources
		CO 4	Identify key threats to biodiversity and develop appropriate policy options for conserving biodiversity in different settings.
		CO 5	Understand environmental pollution and related laws, assess human population impacts on natural resources, and develop scientific skills to analyze and address environmental issues effectively.
		CO 6	Learn skills required to research and analyze environmental issues scientifically and learn how to use those skills in applied situations such as careers that may involve environmental problems and/or issues.