

Department of Artificial Intelligence and Data Science Engineering

Course Outcomes

Year	Course Name & Code	Course Outcome No.	Course Outcome
SE (2020 Course) Sem-I	Discrete Mathematics (210241)	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 combinations.
		CO6	Model and solve computing problem using tree and graph and solve problems using appropriate algorithms.
		CO7	Analyze the properties of binary operations, apply abstract algebra in coding theory and evaluate the algebraic structures.
	Fundamentals of Data Structures (210242)	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 Identify 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 computational problems.
	Object Oriented Programming(OOP) (210243)	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++).
	Computer Graphics (210244)	CO1	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.
	Operating Systems	CO1	Enlist functions of OS and types of 2

	(217521)		system calls
		CO2	Apply process scheduling algorithms to solve a given problem
		CO3	Illustrate deadlock prevention, avoidance and recovery
		CO4	Explain memory management technique
		CO5	Illustrate I/O and file management policies
		CO6	Describe Linux process management
	Business Communication Skills (217525)	CO1	Express effectively through verbal/oral communication and improve listening skills.
		CO2	Write precise briefs or reports and technical documents.
		CO3	Prepare for group discussion / meetings / interviews and presentations.
		CO4	Explore goal/target setting, self-motivation and practicing creative thinking.
		CO5	Operate effectively in multi-disciplinary and heterogeneous teams through the knowledge of team work, Inter-personal relationships, conflict management and leadership qualities.
	Humanity and Social Science (217526)	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.
	Audit Course 3 : Foreign Language- Japanese (Module 1) (217527)	CO1	Will have ability of basic communication.
		CO2	Will have the knowledge of Japanese script.
		CO3	Will get introduced to reading , writing and listening skills.
		CO4	Will develop interest to pursue professional Japanese Language course.
Sem-II	Statistics (217528)	CO1	Identify the use of appropriate statistical terms to describe data.
		CO2	Use appropriate statistical methods to

			collect, organize, display, and analyze relevant data.
		CO3	Use distribution functions for random variables.
		CO4	Distinguish between correlation coefficient and regression.
		CO5	Understand tests for hypothesis and its significance.
	Internet of Things (217529)	CO1	Have a thorough understanding of the structure, function and characteristics of computer systems and Understand the structure of various number systems and its application in digital design.
		CO2	Develop the skill set to build IoT systems and sensor interfacing.
		CO3	Explain the concept of Internet of Things and identify the technologies that make up the internet of things.
		CO4	Analyze trade-offs in interconnected wireless embedded device networks. Select Appropriate Protocols for IoT Solutions.
		CO5	Design a simple IoT system comprising sensors by analyzing the requirements of IoT Application.
		CO6	Identify the Application of IoT in automation of Commercial and Real World examples.
	Data Structures and Algorithms (210252)	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.

	Software Engineering (210253)	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 society in all aspects and evolving into their continuous professional development.
		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.
		CO7	Construct software of high quality – software that is reliable, and that is reasonably easy to understand, modify and maintain efficient, reliable, robust and cost-effective software solutions.
	Management Information Systems (217530)	CO1	Explain the concepts of Management Information System and Business intelligence for MIS.
		CO2	Illustrate the need of information systems in global business and ethical issues.
		CO3	List the IT infrastructure components and explain security in the Information System.
		CO4	Demonstrate the importance of project management and extend its use in the international information system.
		CO5	Illustrate the concepts of decision support systems for business applications.
		CO6	Relate artificial intelligence and data science for Management Information System.
	Project Based Learning II (217533)	CO1	Identify the real life problem from societal need point of view.
		CO2	Choose and compare alternative approaches to select most feasible one.
		CO3	Analyze and synthesize the identified

			problem from technological perspective.
		CO4	Design the reliable and scalable solution to meet challenges.
		CO5	Evaluate the solution based on the criteria specified.
		CO6	Inculcate long life learning attitude towards the societal problems.
	Code of Conduct (217534)	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.
	Audit Course 4 Foreign Language (Japanese) Module 2 (217535)	CO1	Have ability of basic communication.
		CO2	Have the knowledge of Japanese script.
		CO3	Get introduced to reading , writing and listening skills
		CO4	Develop interest to pursue professional Japanese Language course