B.Tech. in Information Technology

Course Outcomes (from 2017, 2018, 2019, 2020, 2021 admitted batch)

100015: Energy Environment, Ecology & Society	**CO1**	define various energy resources, their conversion to electrical power and role in technological & economic development.
	CO2	compare the national/international power status and renewable power development targets & missions.
	CO3	identify the impact of pollution on the ecosystem and control policies adopted at national/international levels.
	CO4	make use of the concepts of ecosystems and their conservation.
	CO5	solve practical problems of society in a sustainable and ethical manner.
	CO6	distinguish the professional duties keeping in mind the environmental safety, health, and welfare of public.
230102:Introduction to Computer Programming	**CO1**	identify situations where computational methods and computers would be useful.
	CO2	describe the basic principles of imperative and structural programming.
	CO3	develop a pseudo-code and flowchart for a given problem.
	CO4	analyze the problems and choose suitable programming techniques to develop solutions.
	CO5	design, implement, debug and test programs.
	CO6	design computer programs to solve real world problems.
160311:Computer System Organization	**CO1**	recall the basic building blocks of computer architecture
	CO2	compare different memories
	CO3	apply the concept of memory mapping, multiprocessor and pipelining in solving real world problems
	CO4	analyze various modes of input-output data transfer
	CO5	evaluate the arithmetic related to the number system
	CO6	develop the skill of writing low level programming.
160312:Design & Analysis of Algorithms	**CO1**	demonstrate a familiarity with major algorithms and data structures.
	CO2	important algorithmic design paradigms and methods of analysis.
	CO3	analyze the asymptotic performance of algorithms.
	CO4	compare different design techniques to develop algorithms for computational problems.
	CO5	design algorithms using greedy strategy, divide and conquer approach, dynamic programming, backtracking and branch n bound approach.
	CO6	understand the hardness and different classes of hardness. further, design approximate solutions for computationally hard problems.
160313:Database Management System	**CO1**	demonstrate the concepts of different type of database system.
	CO2	apply relational algebra concepts to design database system.
	CO3	make use of queries to design and access database system.
	CO4	analyze the evaluation of transaction processing and concurrency control.
	CO5	determine the optimize database for real world applications.
	CO6	design a database system for a real world application.
160314:Operating System	**CO1**	tell the basic concept of operating systems.
	CO2	explain the working procedure of the operating system.
	CO3	analyze the various operating system problems and issues.
	CO4	develop the solutions for various operating system problems and issues.

	CO5	measure the performance of various scheduling and allocation techniques.
	CO6	test the working of various scheduling and allocation techniques.
160501:Discrete Structure	**CO1**	define the basic concept of set theory, prepositional logic, graph theory, discrete numeric function and algebraic structure
	CO2	illustrate the knowledge of course content and distinguish between them in terms of their applications
	CO3	implement the course content to solve the problems.
	CO4	apply the concepts of studied topics with suitable technique faced in engineering problems.
	CO5	analyze the set theory, prepositional logic, graph theory, discrete numeric function and algebraic structure to examine the real world problem
	CO6	design analytical skill and interpret applications of engineering beneficial in real time troubleshooting
160502:Software Engineering	**CO1**	explain the various fundamental concepts of software engineering.
	CO2	develop the concepts related to software design & analysis.
	CO3	compare the techniques for software project management & cost estimation.
	CO4	choose the appropriate model for real life software project.
	CO5	design the software using modern tools and technologies.
	CO6	test the software through different approaches.
160503:Theory of Computation	**CO1**	explain the basic concepts of switching and finite automata theory & languages.
	CO2	relate practical problems to languages, automata, computability and complexity
	CO3	construct abstract models of computing and check their power to recognize the languages.
	CO4	analyse the grammar, its types, simplification and normal form.
	CO5	interpret rigorously formal mathematical methods to prove properties of languages, grammars and automata.
	CO6	develop an overview of how automata theory, languages and computation are applicable in engineering application.
160504:Microprocessor & Interfacing	**CO1**	classify the concepts of different advanced microprocessors and microcontroller.
	CO2	illustrate the various peripheral interfaces, controllers and bus standards.
	CO3	build a system using peripheral devices and controllers for 8086 microprocessor.
	CO4	distinguish the interface with various devices to the microprocessor.
	CO5	design an interface for various devices on 8086/8051 based systems.
	CO6	develops skills in assembly language programming for 8051 & 8086 applications.
160716: Mobile Computing	**CO1**	explain the basic concepts of mobile telecommunications system
	CO2	demonstrate the infrastructure to develop mobile communications system
	CO3	classify the different generations and technology for mobile communications
	CO4	examine the working of different protocols of wireless mobile communication technology.
	CO5	determine the importance of each technology suitable for different situation of mobile and wireless communications
	CO6	develop protocols for adhoc and infrastructure based wireless networks.
900208: Soft Computing	**CO1**	define basic concepts of neural network and fuzzy systems
	CO2	compare solutions by applying various soft computing approaches on a given problem.
	CO3	develop and train different supervised and unsupervised learning

	CO4	classify various nature inspired algorithms according to their application aspect.
	CO5	compare the efficiency of various hybrid systems.
	CO6	design a soft computing model for solving real world problems
900209: Network Security	**CO1**	define various aspects of network security
	CO2	illustrate fundamentals of number theory and cryptography
	CO3	apply security mechanisms to achieve principles of network security
	CO4	analyze the cause for various existing network attacks
	CO5	examine the vulnerabilities in applications over internet.
	CO6	develop a secure protocol for achieving various network security services.
900220: R Programming	**CO1**	define basic programming constructs used in R.
	CO2	explain the various commands used in R.
	CO3	apply various concept of programming for controlling the flow of data using R.
	CO4	analyze the concept of concept of object oriented programming in R.
	CO5	choose appropriate packages of R programming for dealing various tasks.
	CO6	predict results from the datasets using r commands.
900222: Computer Networks	**CO1**	explain the fundamental concepts of computer network.
	CO2	illustrate the basic taxonomy & terminologies of computer network.
	CO3	identify various parameter for affecting the performance of computer network.
	CO4	analyze the concepts of communication using various layer of osi model.
	CO5	evaluate the performance of computer network in congestion and internet.
	CO6	design the network environment and applications for implementation of computer networking concept.