Computer Science

COURSE OUTCOMES MAJOR

Year	Sem	Course Code	Title of the Paper	Outcomes
I	I	1	ESSENTIALS AND APPLICATIONS OF MATHEMATICAL, PHYSICAL AND CHEMICAL	To explore the history and evolution of the Internet and to gain an understanding of network security concepts, including threats, vulnerabilities, and countermeasures.
	I	2	ADVANCES IN MATHEMATICAL, PHYSICAL AND CHEMICAL SCIENCES	Understand and convert between different number systems, such as binary, octal, decimal, and hexadecimal. Differentiate between analog and digital signals and understand their characteristics.Gain knowledge of different types of transmission media, such as wired (e.g., copper cables, fiber optics) and wireless (e.g., radio waves, microwave, satellite).
I	II	3	Problem Solving using C	Understand the working of a digital computer and Fundamental constructs of Programming and Analyze and develop a solution to a given problem with suitable control structures and Apply the derived data types in program solutions
	II	4	Digital Logic Design	Understand how to Convert numbers from one radix to another radix and perform arithmetic operations and Simplify Boolean functions using Boolean algebra and k- maps and Design adders and subtractors circuits,combinational logic circuits such as decoders, encoders, multiplexers and demultiplexers.
II	III	5	Object Oriented Programming using Java	Understand the basic concepts of Object-Oriented Programming and Java Program Constructs and Demonstrate various classes in different packages and can design own packages and Create GUI screens along with event handling
	III	6	Data Structures using C	Realize Linked List Data Structure for various operations,Analyze step by step and develop algorithms to solve real world problems by implementing Stacks, Queues data structures and Understand and implement various searching & sorting techniques.
	III	7	Computer Organization	Differentiate between micro-programmed and hard-wired control units and Analyse the performance of hierarchical organization of memory,Summarize different data transfer techniques.
	III	8	Operating Systems	Analyze different process scheduling algorithms and apply them to manage processes and threads effectively,Create strategies to prevent, detect, and recover from deadlocks, and design solutions for inter-process communication and synchronization problems.
II	IV	9	Database Management Systems	Differentiate between database systems and file based systems,Design a database using ER model,Use SQL commands for creating and manipulating data stored in databases.
	IV	10	Object Oriented Software Engineering	Understand and apply the fundamental principles of Object-Oriented Programming (OOP) concepts and Unified Modeling Language (UML) basics, in the development of software solutions,Analyze and specify software requirements, develop use cases and scenarios, apply object- oriented analysis and design (OOAD) principles.
	IV	11	Data Communication and Computer Networks	Understand and apply network applications, hardware, software, and reference models for network communication and Design and analyze data link layer protocols, multiple access protocols, and wireless LAN technologies,Analyze transport service, transport protocols, and evaluate UDP and TCP in the internet. Understand and evaluate application layer protocols, including DNS, email, WWW, and network management protocols.
III	V	12	Web Interface Designing Technologies	Understand and appreciate the web architecture and services along with its basic building blocks,Demonstrate skills regarding creation of a static website and addition of dynamic behavior to a website.
	V	13	Web Applications Development using PHP & MYSQL	Understand how to use regular expressions, handle exceptions, and validate data using PHP.
	V	14A	Internet of Things	Understand various concepts, terminologies and applications of IoT,Learn how to use various sensors and actuators & develop IoT solutions using Arduino and Develop and Connect IoT with Cloud Platforms.
III	V	14B	Foundations of Data Science	Identify the need for data science and understand various data collection strategies,Summarize and Compute Descriptive Statistics using Pandas.
	V	15A	IoT Applications Development and Programming	Understand the Basic Concepts of Internet of Things,Build the IoT devices with the Node-RED without Complex coding.
	V	15B	Application Development using Python	Examine Python syntax and semantics and be fluent in the use of Python flow control and functions and Create, run and manipulate Python Programs using core data structures like Lists, Dictionaries and use Regular Expressions.

COURSE OUTCOMES MINOR

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