

A	B	C	D	E	F	G
Parent ID number	ID number	Description				
	C1	Employ basic mathematical structures and logic to solve computational problems				
	C2	employ appropriate data structures for solving problems in optimal way and Analyze, and design computer algorithm				
	C3	Apply logical problem solving skills to devise a program and Develop applications using the Object-Oriented programming (O.O) paradigm.				
	C4	Employ visual programming environments to develop good quality applications connected with optimum database.				
	C5	Demonstrate knowledge, and practice of operating systems (OS), system software and in basic and advanced computer architecture.				
	C6	Demonstrate skillset to secure and protect computing assets.				
	C7	Analyze and Design Information Systems and produce good quality software.				
	C8	Demonstrate skill set to analyze and produce knowledge based systems.				
	K1	Ability to identify different computer science and algorithms				
	K2	Ability to identify different programming and database				
	K3	Ability to identify different computer components and architecture				
	K4	Ability to identify different computer networks and security				
	K5	Ability to identify different system analysis design and engineering				
	S1	Explain and practice basic proof techniques and Use different mathematical theories such as, sets, number, probability, and graph theories				
	S2	Design, Analyze and use a wide range of data types to solve a problems and explain the concept and the role of data types in software development.				
	S3	Apply advanced techniques for performing complexity analysis of algorithms for solving algorithmic problems, including divide-and-conquer, greedy, dynamic programming, graph algorithms, backtracking and enumeration				
	S4	Analyze a problem and Determine the steps needed and create a methods to solve a problem.				
	S5	Explain and use the basic and advanced O.O concepts and use of Unified Modeling Language (UML) diagrams for analysis and design of object-oriented software				
	S6	Describe and use the core concepts and constructs of visual programming, And Transform user interface designs into code				
	S7	Categorize and describe different web development technologies. And build Websites using web development tools				
	S8	Explain the concept of database and its benefits and Categorize and describe various database models (Relational, object oriented, network, hierarchical models)				
	S9	Design, analyze and interpret digital logic schema and Identify the fundamental components of computers (CPU, memory, buses, peripherals) and describe their interrelationships				
	S10	Explain the role of the OS and its complete functionality. And Identify the interrelationship between the OS and the computer architecture				
	S11	Explain the basic and core concepts of computer architecture and Identify and evaluate various computer architecture performance criteria. And Describe various techniques used to design high performance CPU.				
	S12	Describe the main types of attacks and their categories				
	S13	Describe the main security objectives and define basic security concepts and principles. and mechanisms related to cryptography, authentication, and authorization				
	S14	Explain the phases and activities of software development lifecycle and the output of each phase				
	S15	Elicit and formulate the business needs and requirements of organizations using appropriate techniques and formalisms and Transform the business requirements into system requirements.				
	S16	Explain the purpose and the core concepts related to the knowledge engineering discipline.				
	S17	Elite knowledge from experts to solve various appropriate techniques. And Use different formalisms to express and model knowledge				

مخرجات تعلم
البرنامج PLOs