GEETHANJALI INSTITUTE OF SCIENCE & TECHNOLOGY::NELLORE

Department of Computer Science and Engineering
COURSE OUTCOMES

Academic Year: 2020-21

Course Outcomes (IV CSE) 2020-21 I Semester Regulation :: R15		
Management Science (15A52601)		
No	**Course Outcome**	**Taxonomy**
C411.1	Explain the basic concepts of management in modern contexts.	Understand
C411.2	Define organization structures and principles.	Remember
C411.3	Demonstrate production and marketing aspects.	Apply
C411.4	Outline the roles and responsibilities of Human Resource Manager.	Analyze
C411.5	Prepare strategies in the modern management.	Apply
C411.6	Describe the modern management practices based on the requirement of the projects.	Understand
Grid Cloud & computing (15A05701)		
No	**Course Outcome**	**Taxonomy**
C412.1	Classify Grid and Cloud Computing Services such as PASS, SAAS, and IAAS.	Understand
C412.2	Explain cloud architecture and applications on different cloud platforms	Remember
C412.3	Compare grid architecture and applications on different platforms	Understand
C412.4	Summarize various grid and cloud computing tools.	Remember
C412.5	Compare various security models in the grid and the cloud environment	Understand
C412.6	Design grid computing techniques to solve large scale scientific problems	Remember
Information Security (15A05702)		
No	**Course Outcome**	**Taxonomy**
C413.1	List the information security requirements for a client and server	Remember
C413.2	Explain cryptographic algorithms, authentication and Encryption techniques	Understand
C413.3	Describe the number theory and different public key cryptography algorithms like RSA, Diffie-Hellman key exchange and etc,	Understand
C413.4	Describe the cryptographic hash functions, Message Authentication codes and Secure Digital signatures	Understand
C413.5	Explain the importance of key management, user authentication and email security services like PGP/SMIME	Understand
C413.6	Identify the security services at transport layer like PGP, SSL,& TLS etc.	Remember
Mobile Application Development(15A05703)		
No	**Course Outcome**	**Taxonomy**
C414.1	Define mobile application software development tools	Remember
C414.2	Express various widgets in mobile applications	Understand
C414.3	Describe various layouts in mobile application design	Understand

C414.4	Use external resources in mobile applications	Apply
C414.5	Build mobile application with selection widgets, dialogs and Fragments	Apply
C414.6	Design and develop menus, database and notifications in mobile applications	Apply

Software Architecture(15A05704)		
No	**Course Outcome**	**Taxonomy**
C415.1	Able to understand the basic concepts of software architecture and software architecture Business cycle.	Understand
C415.2	Understand the various architectural styles with case studies	Understand
C415.3	Definevariousqualityattributesofsoftwarearchitectureandexplainthetechniquesto achieve them.	Remember
C415.4	Understand the concepts of various architectural patterns and some design patterns.	Understand
C415.5	Acquire solid foundation in the field of designing and documenting Software architecture.	Understand
C415.6	Use well-understood paradigms for designing new system	Apply

Software Project Management(15A05707)		
No	**Course Outcome**	**Taxonomy**
C416.1	To understand the concepts of Conventional Software Management Performance, models and Software Economics.	C416.1
C416.2	To Understand the software processes to achieve required quality.	C416.2
C416.3	To understand the concepts about principles of modern software management.	C416.3
C416.4	To determine and to integrate life cycle phases and artifacts of various process to model a software based architecture.	C416.4
C416.5	To classify the process workflow, periodic status assessment and planning and project organization responsibilities.	C416.5
C416.6	To recognize about the project control and process instrumentation using metrics and indicators.	C416.6

Grid & Cloud Computing Laboratory(15A05710)		
No	**Course Outcome**	**Taxonomy**
C417.1	Develop applications using Google Drive and ZOHO Cloud	apply
C417.2	Design and implement applications on the Grid using GridSim Software	apply
C417.3	Develop grid security mechanisms using Glous tool kit.	apply
C417.4	Design applications using Microsoft Azure	apply
C417.5	Develop applications using Google App engine	apply
C417.6	Develop web service applications	apply

Mobile Application Development Laboratory(15A05711)		
No	**Course Outcome**	**Taxonomy**
C418.1	Define development environment to produce mobile applications	Remember
C418.2	Operate mobile applications on handheld devices	Apply
C418.3	Develop various widgets in mobile applications	Apply

C418.4	Design mobile applications with various layouts	Apply
C418.5	Build mobile application along with Media	Apply
C418.6	Design and develop menus in mobile applications	Apply

Course Outcomes (IV CSE) 2021-22 II Semester		Regulation :: R15
Data Analytics(15A05801)		
No	**Course Outcome**	Apply
C421.1	Explain "R" windows environment, data types, and data analytics	Remember
C421.2	Explain NoSql, Correlation, and Regression analysis	Remember
C421.3	Explain Engineering design, technology, and Business problems related to various businesses	Understand
C421.4	Discus time management skills to meet various project requirements	Understand
C421.5	Justify how to work efficiently with colleagues by improving communication skills	Understand
C421.6	Compare tools, technologies & programming languages which are used in day to day analytics cycle	Apply
Cyber Security(15A05806)		
No	**Course Outcome**	**Taxonomy**
C422.1	Identify the Threats And Risks Within Context of The Cyber Security Architecture	Remember
C422.2	Define Cyber Security Incidents To Apply Appropriate Response	Remember
C422.3	Express Decision making Outcomes of Cyber Security Scenarios	Understand
C422.4	Summarize the Forensic Toolkits For Hand-Held Devices	Understand
C422.5	Explain Organizational Implications-Cost Of Cybercrimes and IPR Issues	Understand
C422.6	Explain Social Media Marketing Security And Privacy Implications	Understand
Comprehensive Viva-Voce(15A05807)		
No	**Course Outcome**	**Taxonomy**
C423.1	Use appropriate data structures while developing software applications and systems to analyze and solve real world problems efficiently.	Apply
C423.2	Examine the internal organization and operations of a computer and apply that knowledge in providing computer based solutions for real world problem	Apply
C423.3	Explain the purpose, structure and functions of operating systems like various process scheduling algorithms, memory and file management schemes, various disk scheduling algorithms etc	Understand
C423.4	Illustrate and design relational databases and develop database queries and programs for practical software applications.	Apply
C423.5	Describe to use different types of computer networks to interconnect a distributed	Understand

	community of computers and various interfacing standards and protocols.	
C423.6	Identify and apply operations on discrete computational structures in order to solve problems in different domains.	Remember

<div align="center">**Technical Seminar(15A05808)**</div>

No	Course Outcome	Taxonomy
C424.1	Understand the past and present of the disciplines by exploring their purpose of the technology	Understand
C424.2	Model and understand recent trends and technologies in area of computer of information technology	Apply
C424.3	Recognizing problems after doing research literature survey using various resources.	Understand
C424.4	Prepare concise, comprehend and conclude selective topic in area of information technology	Understand
C424.5	Understand historical and recent trends in theory and method and be able to identify and explain major trends and issues in industry and research.	Understand
C424.6	Provides opportunity for students to develop skills in presentation and discussion of research topics in a public forum	Understand

<div align="center">**Project Work(15A05809)**</div>

No	Course Outcome	Taxonomy
C425.1	Identify and apply operations on discrete computational structures in order to solve problems in different domains.	Remember
C425.2	Use Planning, analyzing, designing and implementing a software project using SDLC model.	Apply
C425.3	Show the solution of identified problem with help of modern technology	Apply
C425.4	Understand the concepts of design methodologies & its implementation	Understand
C425.5	Identify the concepts of testing methodologies & its implementation	Remember
C425.6	Examine the conceptualized, designed, and implemented a working, medium sized project with their team	Apply

(III-CSE) 2021-22 I Semester Regulation ::R15		

Operating Systems(15A05501)

No	Course Outcome	Taxonomy
C311.1	Explain the role of Operating System, its functions and types	Understand
C311.2	Illustrate the concepts of process, Multi processing, Thread and Multi threading	Understand
C311.3	Compare the performance of various CPU scheduling algorithms	Apply
C311.4	Outline different ways to handle the deadlocks and process synchronization	Understand
C311.5	Compare and contrast various memory management techniques	Apply
C311.6	Describe the concepts of File system, I/O management, protection and security	Understand

Computer Networks(15A05502)

No	Course Outcome	Taxonomy
C312.1	Identify types of networks, network topologies and functions of each layer in OSI, TCP/IP reference models.	Understand
C312.2	Define types of switching and transmission media with real time applications.	Remember
C312.3	Describe functions of data link layer and explain data link layer protocols.	Understand
C312.4	Classify routing protocols and analyse how to assign IP addresses for given network	Apply
C312.5	Describe transport layer design issues and protocols of transport layer.	Understand
C312.6	Describe application layer design issues and protocols of application layer.	Understand

Object Oriented Analysis and Design(15A05503)

No	Course Outcome	Taxonomy
C313.1	Determine the solutions to the complex problems using object oriented approach	Apply
C313.2	Explain classes, objects and responsibilities of the problem domain	Understand
C313.3	Explain Conceptual model of UML	Understand
C313.4	Demonstrate Structural Modeling to the given problem using UML concepts	Apply
C313.5	Describe Behavioral modelling Diagrams	Understand
C313.6	Demonstrate Behavioral modeling to the given problem using UML concepts	Apply

Principles of Programming Languages(15A05504)

No	Course Outcome	Taxonomy
C314.1	Explain software development process and software design models.	Understand
C314.2	Apply data types and type systems of various programming languages.	Apply

C314.3	Differentiate the structure of program and computation.	Understand
C314.4	Understand the concepts of programming languages.	Understand
C314.5	Apply functional programming languages and their syntaxes.	Apply
C314.6	Apply logic programming languages and their syntaxes.	Apply

Software Testing (15A05505)

No	Course Outcome	Taxonomy
C315.1	Understand the basic testing procedures	Understand
C315.2	List transaction flows ,data flow testing, their techniques and implementation comments in software testing	Remember
C315.3	Understand domains and interface testing and their testability tips.	Understand
C315.4	Develop paths, regular expressions and logic based testing	Apply
C315.5	Design and implement state graph, state testing, good state graph, bad state graph and their testability tips	Apply
C315.6	Describe graph matrices, matrix properties and node reduction algorithm	Understand

Introduction to Big Data(15A05506)

No	Course Outcome	Taxonomy
C316.1	Demonstrate client – Server architecture and illustrate the components of cloud.	Apply
C316.2	Access and Process Data on Distributed File System.	Understand
C316.3	Design Job Execution in Hadoop Environment.	Apply
C316.4	Develop Big Data Solutions using Hadoop Eco System.	Apply
C316.5	Use Big Data Analytics in real world environment	Apply
C316.6	Develop a Map Reduce Environment.	Apply

Object Oriented Analysis and Design & Software Testing Laboratory (15A05509)

No	Course Outcome	Taxonomy
C317.1	Able to design UML diagrams to the College information system using UML notations and object oriented approach	Apply
C317.2	Able to develop UML diagrams to the Hostel management using UML notations and object oriented approach	Apply
C317.3	Able to create UML diagrams to the ATM system and other domains using UML notations and object oriented approach	Apply
C317.4	Able to demonstrate the programs and its failures	Apply
C317.5	Able to support in generating test plan, test cases and test suites	Understand

C317.6	Able to understand and Study of Testing Tools	Understand

Operating Systems Laboratory(15A05510)

No	Course Outcome	Taxonomy
C318.1	Choose the best CPU scheduling algorithm for a given problem instance	Evaluate
C318.2	Build code to for file allocation and file organization techniques	Create
C318.3	Assess the performance of page replacement algorithms	Evaluate
C318.4	Analyze various classical Synchronization problems	Analyze
C318.5	Classify various memory management techniques	Analyze
C318.6	Develop algorithm for deadlock avoidance and detection	Create

Social Values & Ethics (Audit Course)(15A99501)

No	Course Outcome	Taxonomy
C319.1	Discuss their own ethical values and social context of problems	Understand
C319.2	Determine the professional ethics which includes moral issues and virtues, social responsibilities of an engineer, right, and qualities of Moral Leadership	Apply
C319.3	Explain about philosophy of Life and Individual qualities	Understand
C319.4	Identify the core values that shape the ethical behavior of an engineer and to create awareness on Engineers responsibilities and rights.	Remember
C319.5	Identify the appropriate technologies and management patterns to create harmony in professional and personal life.	Understand
C319.6	Explain their learning's about environment conservation, enrichment and Sustainability	Understand
C319.1	Discuss their own ethical values and social context of problems	Understand

(III-CSE) 2020-21 II SEMESTER	Regulations::R15

Compiler Design(15A05601)

No	Course Outcome	Taxonomy
C321.1	Define the functionality of each phase along with lexical analyzer involved in Compilation process	Remember
C321.2	Use the parsing techniques including Bottom-up and Top-down parsing for the given programming construct described in Context Free Grammar	Apply
C321.3	Describe different intermediate code representations of Annotated parse tree	Understand
C321.4	Express the concepts of storage organization in Runtime environment	Understand
C321.5	Summarize issues in the design of a Code generator	Understand
C321.6	Explain different optimize techniques to improve Compiler performance	Understand

Data Warehousing & Mining (15A05602)

No	Course Outcome	Taxonomy
C322.1	Explain the basic concepts of data warehouse and data mining	Understand
C322.2	Apply various techniques to preprocess the data.	Apply
C322.3	Explain online analytical processing technology for efficient mining of data.	Understand
C322.4	Explain the performance of frequent itemset mining algorithms.	Understand
C322.5	Apply and solve the problems based on supervised and unsupervised learning.	Apply
C322.6	Explain Mining real world complex data.	Understand

Design Patterns(15A05603)

No	Course Outcome	Taxonomy
C323.1	Construct a design consisting of a collection of modules.	Understand
C323.2	Exploit well-known design patterns (such as Iterator, Observer, Factory and Visitor).	Understand
C323.3	Distinguish between different categories of design patterns.	Understand
C323.4	Ability to understand and apply common design patterns to incremental/iterative development.	Understand
C323.5	Ability to identify appropriate patterns for design of given Problem.	Remember
C323.6	Design the software using Pattern Oriented Architectures.	Apply

Design and Analysis of Algorithms(15A05604)

No	Course Outcome	Taxonomy
C324.1	Illustrate the concepts of asymptotic performance of algorithms	Apply
C324.2	Describe the general principle of Divide and Conquer and identify suitable problems to apply Divide and Conquer paradigm.	Understand
C324.3	Identify optimization problems and the general principles of Greedy and Dynamic Programming paradigms to solve them.	Understand
C324.4	Demonstrate various graph algorithms, recursive and iterative backtracking algorithms and their complexities	Apply
C324.5	Illustrate the concepts of Lower bound, branch and bound to solve computational problems.	Apply
C324.6	Differentiate deterministic and Non-deterministic algorithms	Understand

Web and Internet Technologies(15A05605)

No	Course Outcome	Taxonomy
C325.1	Illustrate the usage of web servers and HTML	Understand
C325.2	Illustrate the usage of JavaScript, Java Server Pages and JDBC	Understand
C325.3	Demonstrate the importance of PHP in building web applications	Understand
C325.4	Make use of HTML forms in real applications	Apply
C325.5	Interpret the usage of XML and make use of XML in real world scenarios	Apply
C325.6	Illustrate the usage of AJAX in real world environment	Understand

Linux Environment System(15A05607)

No	Course Outcome	Taxonomy
C326.1	Describe and use the LINUX operating system	Apply
C326.2	Demonstrate installing LINUX in a server	Apply
C326.3	Use the fundamental LINUX system tools and utilities	Apply
C326.4	Demonstrate and write shell scripts in order to perform basic shell programming	Apply
C326.5	Understand Booting and Shutting Down	Understand
C326.6	Understand the LINUX file system, core system services and printing	Understand

Web and Internet Technologies Laboratory(15A05609)

No	Course Outcome	Taxonomy
C327.1	Make use static web pages using HTML5 and CSS	Apply

C327.2	Demonstrate Java Script Programs for user defined functions,validate forms and to read XML data.	Apply
C327.3	Iiiustrate programs using Servlet and JSP.	Apply
C327.4	Make use of HTML pages and handle exception handling using Java Script	Apply
C327.5	Demonstrate predefined functions and Regular Expressions PHP programs	Apply
C327.6	Illustrate DTD and XML Programs	Apply

Data Warehousing & Mining Laboratory(15A05610)

No	Course Outcome	Taxonomy
C328.1	Describe Build Data Warehouse and Explore WEKA	Understand
C328.2	Describe how to Perform data preprocessing tasks and Demonstrate performing classification, clustering, regression and association rule mining on data sets	Remember
C328.3	List the different models of OLAP and data preprocessing	Remember
C328.4	Enlist various algorithms used in information analysis of Data Mining Techniques	Remember
C328.5	Demonstrate the knowledge retrieved through solving problems	Apply
C328.6	Recognize what kind of skills required to apply data mining tools for solving practical problems	Understand

Advanced English Language Communication Skills(AELCS) Laboratory) (Audit Course) (15A52602)

No	Course Outcome	Taxonomy
C329.1	Learning new vocabulary and analyze the context for proper usage	Apply
C329.2	Analysing the texts and multimedia resources for developing comprehension abilities.	Analyse
C329.3	Evaluate and exhibit acceptable etiquette essential in social and professional settings	Evaluate
C329.4	Develop employability skills by getting command over time management and problem solving strategies.	create
C329.5	Build efficient Written communication skills by practicing project reports.	create
C329.6	Build the ability of using language effectively to face interviews, group discussions, public speaking	create

Comprehensive Online Examination-II(15A05611)

No	Course Outcome	Taxonomy
C3210.1	Describe Linux kernel mode with user mode and differentiate Kernel structuring methods Describe Process management and Thread management strategies.	Remember

C3210.2	Conceptualize and design efficient and effective algorithmic solutions for different real world problems.	Apply
C3210.3	Explain the principles and practice of object oriented analysis and design in the construction of robust, maintainable programs which satisfy their requirements	Understand
C3210.4	Examine various code optimization techniques to improve the performance of a program in terms of speed & space	Apply
C3210.5	Illustrate the Conceptual, Logical, and Physical design of Data Warehouses OLAP applications and OLAP deployment.	Apply
C3210.6	Design to create structure of web page, to store the data in web document, and transport information through web.	Apply

(II-CSE) 2020-21 I SEMESTER	Regulations::R19

Number Theory and Applications

No	Course Outcome	Taxonomy
C221.1	Understand the basic concepts of Number Theory, Fermat numbers, Linear Diophantine equation	Understand
C221.2	Understand Euclidean theorem and backwards substitution	Understand
C221.3	Understand basic properties of Congruences, Chinese remainder theorem	Understand
C221.4	Understand the concepts of congruences for Computer file storage and various applications	Understand
C221.5	Understand the terminology of Finite fields, rho method and fermat factorization	Understand
C221.6	Understand the terminology of cryptology and different encryption mechanisms	Understand

Computer Organization

No	Course Outcome	Taxonomy
C222.1	Describe the fundamental organisation of a computer system.	Remember
C222.2	Explain addressing modes, instruction formats and program control statements	Understand
C222.3	Apply Arithmetic Operation and Functional unit of Processor	Apply
C222.4	Differentiate the organization of various parts of a system memory hierarchy	Analyse
C222.5	Describe basic concept of Input and output devices	Understand
C222.6	Describe fundamentals concepts of pipeline and vector processing	Understand

Design and Analysis of Algorithms

No	Course Outcome	Taxonomy
C223.1	Illustrate the concepts of asymptotic performance of algorithms	Apply
C223.2	Describe the general principle of Divide and Conquer and identify suitable problems to apply Divide and Conquer paradigm.	Understand
C223.3	Identify optimization problems and the general principles of Greedy and Dynamic Programming paradigms to solve them.	Understand
C223.4	Demonstrate various graph algorithms, recursive and iterative backtracking algorithms and their complexities	Apply
C223.5	Illustrate the concepts of Lower bound, branch and bound to solve computational problems.	Apply

C223.6	Differentiate deterministic and Non-deterministic algorithms	Understand

Entrepreneurship

No	Course Outcome	Taxonomy
C224.1	Recall the role and responsibilities of an entrepreneur in modern business scenario.	Remember
C224.2	Explain about the social and ethical entrepreneurship	Understand
C224.3	Demonstrate the new venture expansion strategies	Understand
C224.4	Summarize the creative pursuit of innovative ideas	Understand
C224.5	Discuss marketing aspects of entrepreneurship	Understand
C224.6	List the sources of finance and legal frame work of entrepreneurial ventures	Remember

Operating Systems

No	Course Outcome	Taxonomy
C225.1	Explain the role of operating system, its functions, and types	Understand
C225.2	Illustrate the concepts of process, multiprocessing, thread, and multithreading.	Analyse
C225.3	Compare the performance of various CPU scheduling algorithms.	Evaluate
C225.4	Compare and contrast various memory management techniques.	Evaluate
C225.5	Outline different ways to handle the deadlocks and process synchronization.	Analyse
C225.6	Describe the concepts of file system, I/O management, protection, and security	Understand

Software Engineering

No	Course Outcome	Taxonomy
C226.1	Differentiate the different types of software process models and able to categorize the types of software's	Analyze
C226.2	Understand the requirements of modelling a software process	Understand
C226.3	Interpret the concepts of heterogeneous design methodologies	Apply
C226.4	Compare Between Various Testing Strategies	Remember
C226.5	Understand Multiple Quality Control Mechanisms	Understand
C226.6	Recognize The need for maintenance of developed software product	Apply

Operating Systems Lab

No	Course Outcome	Taxonomy

C227.1	Demonstrate UNIX commands	Apply
C227.2	Implement Bankers Algorithms to Avoid and prevent the Dead Lock	Apply
C227.3	Illustrate the concepts of memory management	Apply
C227.4	Illustrate the file organization techniques	Apply
C227.5	Illustrate the concepts of process, multiprocessing, thread, and multithreading, shared memory.	Apply
C227.6	Apply CPU scheduling algorithms	Apply

Software Engineering Lab		
No	**Course Outcome**	**Taxonomy**
C228.1	Explain Acquaint with historical and modern software methodologies.	Understand
C228.2	Design the phases of software projects and practice the activities of each phase	Create
C228.3	Apply clean coding Method	Apply
C228.4	Construct and Develop Take part in project management	Create
C228.5	Develop the various types of cohesion and coupling	Apply
C228.6	Apply testing Methodologies by taking any application.	Apply

Biology For Engineers		
No	**Course Outcome**	**Taxonomy**
C229.1	Explain about cells and their structure and functions.	Understand
C229.2	Explain about biomolecules, their structure and function and. How biomolecules are useful in Industry.	Understand
C229.3	Briefly about human physiology.	Remembering
C229.4	Explain about genetic material, how they replicate, pass and preserve vital information in living Organisms.	Understand
C229.5	Know about application of biological Principles in different technologies for the production of medicines and Pharmaceutical molecules.	Remember
C229.6	Summarize the applications of enzymes in industry	Understand

(I-CSE) 2020-21 I SEMESTER		Regulations::R19
Mathematical Foundations of Computer		
No	**Course Outcome**	**Taxonomy**
C211.1	Evaluate basic logic statements using truth tables and properties of logic and find the PCNF and PDNF	Understand
C211.2	Describe the properties of sets ,functions and groups	Understand
C211.3	Understand the concepts of algebraic structures	Understand
C211.4	Explain the fundamental principle of counting and identify the relationship between permutations and combinations	Understand
C211.5	Determine the recurrence relation using generating functions	Apply
C211.6	Understand the concepts of graphs &Apply the concepts of functions to identify the isomorphic graphs ,DFS,BFS and spanning trees	Apply
Digital Logic Design		
No	**Course Outcome**	**Taxonomy**
C212.1	Differentiate various number systems, binary codes	Understand
C212.2	Solve the Boolean Expressions using basic postulates of Boolean algebra.	Apply
C212.3	Solve the Boolean Expressions using k-maps and other minimization methods .	Apply
C212.4	Implement different combinational circuits.	Apply
C212.5	Implement different Sequential circuits.	Apply
C212.6	Explain different types of Programmable Logic Devices and Transistor Logic Circuits.	Understand
Design Thinking		
No	**Course Outcome**	**Taxonomy**
C213.1	Explain about Design and Process of Product Development	Understand
C213.2	Describe about benefits, principles , innovation and various case studies in design thinking	Understand
C213.3	Identify the Idea generation techniques and methods used for Product development	Remember

C213.4	Recognize the design thinking process in IT and Agile software development	Understand
C213.5	Identify TILES toolkit and cloud implementation for Design thinking activities in IT	Remember
C213.6	Describe about design techniques related to Variety of Software services.	Understand

Database Management Systems

No	Course Outcome	Taxonomy
C214.1	Interpret the basic concepts of DBMS and Relational Model	Understand
C214.2	Demonstrate the concepts of SQL and Advanced SQL and apply to different scenarios	Apply
C214.3	Develop an E-R Model and design a database using Normal Forms	Apply
C214.4	Illustrate the concepts of Query Processing and query Optimization	Understand
C214.5	Elucidate the concepts of Transactions and Concurrency Control	Understand
C214.6	Describe the concepts of Recovery Management System	Understand

Object Oriented Programming Through

No	Course Outcome	Taxonomy
C215.1	Understand the syntax, semantics of Java Programming Language and apply object oriented programming principles to real world problems	Understand
C215.2	Apply code reusability through inheritance, packages and interfaces	Apply
C215.3	Develop User defined Exceptions in real world problems	Apply
C215.4	Develop applications by using parallel streams for better performance.	Remember
C215.5	Use multithreading and collection framework for real world problems	Apply
C215.6	Build GUI using applets, swings and access the database using JDBC	Apply

Python Programming

No	Course Outcome	Taxonomy
C216.1	Interpret the basic concepts, modular approaches to solve the problems.	Understand
C216.2	Apply the concepts of conditional execution, recursion, built in functions, turtle to solve the problems	Apply
C216.3	Define and demonstrate the use of built-in String functions	Remember
C216.4	Apply python programs to read and write data from/to files.	Apply
C216.5	Summarize various data structures like Lists, Dictionaries, Tuples and its applications.	Understand

C216.6	Identify Python classes, objects, inheritance, goodies	Apply

Universal Human Values

No	Course Outcome	Taxonomy
C217.1	Discuss the concept value-education in individual's lifefor happiness & prosperity	Understand
C217.2	Explain the term self-exploration and its application for self-evaluation and development.	Understand
C217.3	Discuss the importance of values in human relationships	Understand
C217.4	Explain the holistic perception of harmony at level of self, family, society and nature.	Understand
C217.5	Outline the co-existence of nature and human being	Analyze
C217.6	Use professional ethics in their future profession for making a value-based	Apply

Management Systems Lab

No	Course Outcome	Taxonomy
C218.1	Design tables and apply constraints using DDL	Apply
C218.2	Develop Queries using DML	Apply
C218.3	Implement PL/SQL programs	Apply
C218.4	Develop Programs using Procedures and Functions	Apply
C218.5	Develop Programs using Cursors and Triggers	Apply
C218.6	Design the ER diagrams for different engineering applications	Apply

Object Oriented Programming Through

No	Course Outcome	Taxonomy
C219.1	Recognize the Java programming environment	Understand
C219.2	Select appropriate programming constructs to solve a problem	Apply
C219.3	Design reliable programs using Java exception handling features	Apply
C219.4	Develop efficient programs using multithreading	Apply
C219.5	Develop GUI using Java components	Apply
C219.6	Develop programs to connect to Database using JDBC	Apply

Python Programming Lab

No	Course Outcome	Taxonomy
C2110.1	Design solutions to solve mathematical problems	Apply
C2110.2	Develop python programs that read and write data from & to files	Apply
C2110.3	Build Python user defined functions for solving problems	Apply
C2110.4	Design object-oriented programs with Python classes	Apply
C2110.5	Illustrate Conditionals and Loops for Python Programs	Analyse
C2110.6	Develop graphics using python turtle library	Apply
	Environmental Science	
No	Course Outcome	Taxonomy
C2111.1	Gain the knowledge about environment , natural resources and different techniques involved in its conservation.	Understand
C2111.2	Get the information about different eco-systems and its functions.	Understand
C2111.3	Recognize the types of bio-diversity along with values and conservation methods.	Understand
C2111.4	Gain the knowledge about various environmental pollutions and able to design the environmental friendly process in engineering.	Remember
C2111.5	Gain the knowledge about sustainable development concept and practice it in life, society and Industry.	Remember
C2111.6	Understand the both impacts of population growth on environment and needed measures to protect the environment .	Understand