KARPAGAM INSTITUTE OF TECHNOLOGY

COIMBATORE - 641105

B.TECH. INFORMATION TECHNOLOGY
COURSE OUTCOMES

Course Name: Communicative English

CO No.	Course Outcomes (COs)
C101.1	Define the rules of English grammar and construct a paragraph.
C101.2	Interpret the process and describe the action used in Engineering trends.
C101.3	Extend the formal and informal conversation both in personal and professional.
C101.4	Outline an informal letter and email for official writing.
C101.5	Show the group discussion and face to face conversation for effective speaking.

Course Name: Engineering Mathematics - I

CO No.	Course Outcomes (COs)
C102.1	Extend the limit definition and rules of differentiation to differentiate functions.
C1022	Apply differentiation methods to solve maxima and minima problems.
C102.3	Explain the concept of definite and indefinite integrals.
C102.4	Apply integration to compute multiple integrals, area, volume, integrals in polar coordinates, in addition to change of order and change of variables.
C102.5	Apply the concept of differentiation in solving differential equations.

Course Name: Engineering Physics

CO No.	Course Outcomes (COs)
C103.1	Interpret the basic properties of matter in I Shape girders, bending moment etc.
C103.2	Illustrate the concepts of waves and optical devices and their applications in fiber optics.
C103.3	Demonstrate the thermal properties of materials in expansion joints and heat exchangers
C103.4	Summarize the advanced physics concepts of quantum theory and its applications in tunneling microscopes
C103.5	Outline the basics of crystal structures and different techniques to grow the crystals.

Course Name: Engineering Chemistry

CO No.	Course Outcomes (COs)
C104.1	Outline the requirements of boiler water, problems and treatment techniques.
C104.2	Explain the advantages of catalyst and adsorption on pollution abatement.
C104.3	Illustrate the basic concepts of phase rule in alloying and demonstrate the behavior of one and two component systems
C104.4	Explain the types of fuels, manufacture of solid, liquid and gaseous fuels and calculations of calorific value
C104.5	Identify the various non-conventional energy sources and list the energy storage devices.

Course Name: Problem Solving and Python Programming

CO No.	Course Outcomes (COs)
C105.1	Develop algorithmic solutions to simple computational Problems.
C105.2	Construct Python Programs using Data, Expressions and Statements for solving problems.
C105.3	Apply the control flow and functions concepts in Python for solving problems.
C105.4	Make use of Lists, Tuples and Dictionary for solving problems.
C105.5	Make use of Files, Modules and Packages for solving problems.

Course Name: Engineering Graphics

CO No.	Course Outcomes (COs)
C106.1	Illustrate about conics and orthographic views of engineering components.
C106.2	Show the projection of points, lines and planes.
C106.3	Construct the solids and projection of solids at different positions.
C106.4	Model the sectioned view of solids and development of surface.
C106.5	Develop the isometric projection and perspective views of an object/solid.

KARPAGAM INSTITUTE OF TECHNOLOGY

COIMBATORE - 641105

Course Name: Problem Solving and Python Programming Laboratory

CO No.	Course Outcomes (COs)
C107.1	Develop solutions to simple computational problems using Python programs.
C107.2	Make use of conditionals and loops in Python for solving problems.
C107.3	Develop Python programs by defining functions and calling them.
C107.4	Make use of compound data structures for solving problems.
C107.5	Develop Python programs using files.

Course Name: Physics and Chemistry Laboratory

CO No	Course Outcomes (COs)
C108.1	The students will have the ability to test materials by illustrate the physics principles in optics and properties of matter. Show the thickness of a thin wire using Air-wedge method.
C108.2	Show the velocity of ultrasonic waves in a given liquid medium and band gap of a semiconducting material.
C108.3	Estimate the hardness, chloride, alkalinity, Dissolved oxygen content of water samples. Estimate the amount of acid using conduct metric, pH metric method.
C108.4	Estimate the metal ion content in given sample by spectrophotometric, potentiometric and flame photometric method.
C108.5	Calculation of molecular weight of polyvinyl alcohol using Ostwald viscometer and estimate the CMC. Estimate rate of the reaction by Pseudo first order kinetics -ester hydrolysis. Calculate the weight loss of metal by Corrosion experiment.

Course Name: Technical English

CO No.	Course Outcomes (COs)
C109.1	Explain the text transitions for comprehending the scientific and technical context.
C109.2	Illustrate the data from graphs and charts.
C109.3	Infer proper vocabulary, correct spelling and grammar to create reports.
C109.4	Outline a formal cover letter along with a resume to email in a convincing manner.
C109.5	Show a formal and informal conversations to participate in group discussions for delivering effective technical presentations

KARPAGAM INSTITUTE OF TECHNOLOGY

COIMBATORE - 641105

Course Name: Engineering Mathematics - II

CO No.	Course Outcomes (COs)
C110.1	Extend the concept of eigenvalues and eigenvectors in diagonalization of a matrix, Symmetric matrices, and similar matrices.
C110.2	Compare the ideas of gradient, divergence and curl of a vector point function and related identities.
C110.3	Illustrate the view of line, surface and volume integrals using Gauss, Stokes and Green‘s theorems and their verification.
C110.4	Summarize the purpose of analytic functions, conformal mapping and complex integration in Engineering field.
C110.5	Summarize the concepts of Laplace transform and inverse Laplace transform in application of differential equations with constant coefficients.

Course Name: Physics for Information Science

CO No.	Course Outcomes (COs)
C111.1	Summarize the classical and quantum electron theories and implement it in energy band structures.
C111.2	Classify the types of semiconductor and explain the principle behind Hall effect.
C111.3	Illustrate the magnetic properties of materials and its applications in data storage devices.
C111.4	Outline the functioning of optical materials in the field of optoelectronics and optical data storage devices.
C111.5	Understand the basics of quantum structures and their applications in carbon electronics.

Course Name: Basic Electrical, Electronics and Measurement Engineering

CO No.	Course Outcomes (COs)
C112.1	Apply the essential concepts of electric circuits and analysis
C112.2	Explain the principle of operation of electric machines and transformers
C112.3	Outline the various renewable energy sources and common domestic loads.
C112.4	Interpret the fundamentals of electronic circuits using different semiconductor devices.
C112.5	Illustrate the measuring and metering instruments for electric circuits.

KARPAGAM INSTITUTE OF TECHNOLOGY

COIMBATORE - 641105

Course Name: Information Technology Essentials

CO No.	Course Outcomes (COs)
C113.1	Construct websites and explain the types of servers.
C113.2	Build server-side web applications that process request from client side using PHP.
C113.3	Explain network layers concepts and functions of each layers.
C113.4	Interpret mobile communication process and technologies.
C113.5	Develop interactive applications with database.

Course Name: Programming in C

CO No.	Course Outcomes (COs)
C114.1	Develop simple applications in C using basic constructs.
C114.2	Make use of arrays and strings for solving problems.
C114.3	Apply functions and pointers in C for a given application.
C114.4	Develop applications in C using structures.
C114.5	Apply file processing techniques for an application.

Course Name: Engineering Practices Laboratory

CO No.	Course Outcomes (COs)
C115.1	Model carpentry components and use welding equipment to join the structures
C115.2	Demonstrate Plumbing requirements of domestic buildings and machining
C115.3	Illustrate on basic machining operations, sheet metal works, centrifugal pump, Air conditioner, operations of smithy, foundary and fittings.
C115.4	Apply the concept of basic electrical engineering for house wiring practice and measurement of electrical quantities.
C115.5	Apply electronic principles to develop circuits for primitive applications

KARPAGAM INSTITUTE OF TECHNOLOGY

COIMBATORE - 641105

Course Name: C Programming Laboratory

CO No.	Course Outcomes (COs)
C116.1	Develop simple applications in C using basic constructs.
C116.2	Make use of Arrays, strings, functions and recursion concepts in C for solving problems.
C116.3	Apply structures and pointers concepts in C for a given application.
C116.4	Develop application using sequential and random access file processing techniques.
C116.5	Develop an application using the core concepts in C.

Course Name: Information Technology Essentials Laboratory

CO No.	Course Outcomes (COs)
C117.1	Build interactive websites using basic HTML tags, different styles, links and with all Basic control elements
C117.2	Develop dynamic web sites and handle multimedia components.
C117.3	Build server side web applications that process request from client side using PHP and Database connectivity.
C117.4	Develop Personal Information System.
C117.5	Identify the technologies behind computer networks and mobile communication.

Course Name: Discrete Mathematics

CO No.	Course Outcomes (COs)
C201.1	Summarize the concepts of logic of a program.
C201.2	Demonstrate the notions of counting Principle to solve combinatorial problems.
C201.3	Apply the concepts of graph theory in network of communications.
C201.4	Identify the purpose of algebraic structures in the field of computer science.
C201.5	Develop the concepts of Latices in Boolean algebra.

KARPAGAM INSTITUTE OF TECHNOLOGY

COIMBATORE - 641105

Course Name: Digital Principles and System Design

CO No.	Course Outcomes (COs)
C202.1	Illustrate the theorems and postulates of Boolean algebra and Karnaugh Map technique.
C202.2	Develop Combinational Logic Circuits for the given requirement and write the HDL code for them.
C202.3	Develop Synchronous Sequential Logic circuits and determine its function and write the HDL code for them
C202.4	Develop the given Asynchronous Sequential Logic circuits and determine its function.
C202.5	Explain the different semiconductor memories and PLD's.

Course Name: Data Structures

CO No.	Course Outcomes (COs)
C203.1	Utilize List Abstract Data Type for solving problems.
C203.2	Apply the Stack and Queue data structures to solve various computing problems.
C203.3	Apply the non-linear Tree data structures to different computing problems.
C203.4	Apply the non-linear Graph data structures to different computing problems.
C203.5	Analyze the various sorting, searching algorithms, and hashing techniques.

Course Name: Object Oriented Programming

CO No.	Course Outcomes (COs)
C204.1	Develop simple java programs using OOP Principles.
C204.2	Construct Java programs with the concepts of inheritance and interfaces.
C204.3	Build Java applications using exceptions and I/O streams.
C204.4	Utilize threads and generics classes in Java applications development.
C204.5	Make use of AWT and Swing components for interactive GUI applications.

KARPAGAM INSTITUTE OF TECHNOLOGY

COIMBATORE - 641105

Course Name: Analog and Digital Communication

CO No.	Course Outcomes (COs)
C205.1	Explain the different types of analog communication techniques.
C205.2	Understand the data and pulse communication techniques for high-speed communication.
C205.3	Explain the different types of Digital communication techniques.
C205.4	Summarize the Source and Error control coding techniques for error free communication.
C205.5	Demonstrate the process involved in multi-user radio communication.

Course Name: Data Structures Laboratory

CO No.	Course Outcomes (COs)
C206.1	Construct linear data structures using Array and Linked List.
C206.2	Construct appropriate Tree data structure operations for solving a given problem.
C206.3	Construct appropriate Graph data structure operations for solving a given problem.
C206.4	Analyze the various searching and sorting algorithms.
C206.5	Apply appropriate hash functions that result to a collision-free data storage and recovery scenario.

Course Name: Object Oriented Programming Laboratory

CO No.	Course Outcomes (COs)
C207.1	Develop Java programs for simple applications using classes, packages and interfaces.
C207.2	Make use of String and Array List for problem solving.
C207.3	Apply the concept of Exception handling and multithreading in Java Program.
C207.4	Develop applications using file processing, generic programming.
C207.5	Utilize AWT, Swing and Event Handling concepts for developing Graphical User Interface application.

Course Name: Digital Systems Laboratory

CO No.	Course Outcomes (COs)
C208.1	Infer the principles of Boolean algebra and implement it using logic gates.
C208.2	Experiment with Combinational Logic circuits to verify its function.
C208.3	Experiment with Sequential Logic circuits to verify its function.
C208.4	Develop Hardware Description Language (HDL) for simple Combinational Logic circuits.
C208.5	Develop Hardware Description Language (HDL) for simple Sequential Logic circuits.

Course Name: Interpersonal Skills/Listening & Speaking

CO No.	Course Outcomes (COs)
C209.1	Select the concept and respond appropriately in formal and informal conversation.
C209.2	Show the speaking skill which is need for Interview and group discussions.
C209.3	Summarize the process and product to improve convincing skill.
C209.4	Demonstrate effective presentation and use in communication.
C209.5	Extend both formal and informal conversation in both personal and professional.

Course Name: Probability and Statistics

CO No.	Course Outcomes (COs)
C210.1	Relate the concepts of probability and standard distributions in real life phenomenon.
C210.2	Summarize the notions of covariance, correlation and regression in engineering applications.
C210.3	Summarize the testing of hypothesis for small and large samples in real life problems.
C210.4	Translate the view of classifications of design of experiments in the field of agriculture and statistical quality control.
C210.5	Infer the notion of sampling distributions and statistical techniques used in engineering and management problems.

Course Name: Computer Architecture

CO No.	Course Outcomes (COs)
C211.1	Interpret the basic structure of computer operations, instructions and addressing modes.
C211.2	Make use of algorithms to perform arithmetic operations.
C211.3	Build pipelined processor using MIPS architecture.
C211.4	Illustrate the concepts of parallel processing architecture.
C211.5	Summarize the fundamentals of memory system, bus and I/O system concepts.

Course Name: Database Management Systems

CO No.	Course Outcomes (COs)
C212.1	Interpret the fundamental concepts of relational database.
C212.2	Develop Relational model from ER model to perform database design and generate queries with normalization criteria to optimize queries.
C212.3	Make use of serializability and concurrency control in transaction processing.
C212.4	Utilize the indexing and hashing techniques in database application.
C212.5	Apply advanced database concepts for a given application.

Course Name: Design and Analysis of Algorithms

CO No.	Course Outcomes (COs)
C213.1	Develop algorithms for various computing problems and time and space complexity analysis.
C213.2	Analyze the Brute Force and Divide and Conquer algorithm design techniques for a given problem.
C213.3	Analyze the Dynamic and Greedy algorithm design techniques for a given problem.
C213.4	Analyze the Iterative improvement algorithm design techniques and solve the given Problem.
C213.5	Examine Backtracking and Branch and Bound Techniques and Modify the existing algorithms to improve efficiency.

Course Name: Operating Systems

CO No.	Course Outcomes (COs)
C214.1	Outline the functionalities of Operating Systems.
C214.2	Analyze various scheduling algorithms and explain the process synchronization.
C214.3	Apply memory management schemes in OS.
C214.4	Summarize the functionalities of File systems and I/O systems.
C214.5	Make use of administrative tasks on Linux Servers and compare iOS & Android Operating Systems.

Course Name: Environmental Science and Engineering

CO No.	Course Outcomes (COs)
C215.1	Explain the concept of ecosystem, its values, and threats and outline the methods to conserve the biodiversity.
C215.2	List the causes and effects of Environmental Pollution and provide technical solution for pollution control.
C215.3	Interpret the types of natural resources available and measures to utilize them sustainably.
C215.4	Identify the social issues in the environment and find solutions for the environmental Protection.
C215.5	Outline the impact of population growth on environment and human health.

Course Name: Database Management Systems Laboratory

CO No.	Course Outcomes (COs)
C216.1	Build the applications to test Nested and Join Queries.
C216.2	Develop simple applications that use Views and Normalization.
C216.3	Construct applications that require a Front-end Tool.
C216.4	Identify the use of Tables, Views, Functions and Procedures.
C216.5	Build the applications to test Nested and Join Queries.

Course Name: Operating Systems Laboratory

CO No.	Course Outcomes (COs)
C217.1	Make use of Unix Commands and Shell programming.
C217.2	Build CPU Scheduling Algorithms for a given processes detail.
C217.3	Develop IPC, Semaphores for memory management.
C217.4	Build Threading & Synchronization Applications and Deadlock Avoidance & Detection Algorithms.
C217.5	Develop Page Replacement Algorithms and File Organization and Allocation Strategies.

Course Name: Advanced Reading and Writing

CO No.	Course Outcomes (COs)
C218.1	List the glosses and footnotes to aid reading comprehension.
C218.2	Illustrate reasons and examples to support ideas in writing.
C218.3	Show critical thinking in various professional contexts.
C218.4	Outline the ideas relevantly and coherently in writing and speaking.
C218.5	Infer how the text positions the reader.

Course Name: Algebra and Number Theory

CO No.	Course Outcomes (COs)
C301.1	Understand the basic concepts of groups, rings and field and to know about uses of these concepts in various sets.
C301.2	Summarize the notions of finite fields and polynomials to solve problems in advanced algebra.
C301.3	Explain the theory of divisibility and canonical decompositions.
C301.4	Solve the linear Diaphontine Equations and Congruence's.
C301.5	Apply Classical theorem and multiplicative functions in number theory.

KARPAGAM INSTITUTE OF TECHNOLOGY

COIMBATORE - 641105

Course Name: Computer Networks

CO No.	Course Outcomes (COs)
C302.1	Interpret the basic layers and its functions in computer networks.
C302.2	Identify the functionalities of data link and media access control protocols.
C302.3	Apply routing algorithms for different kinds of networks.
C302.4	Make use of the transport layer's functionalities and protocols.
C302.5	Explain the working of application layer protocols.

Course Name: Microprocessors and Microcontrollers

CO No.	Course Outcomes (COs)
C303.1	Construct the assembly language programs based on 8086 microprocessor.
C303.2	Outline the system bus timing and processor configurations.
C303.3	Model the interfacing of microprocessor with supporting chips.
C303.4	Construct the assembly language programs based on 8051 microcontroller.
C303.5	Develop 8051 microcontroller based interfacing systems.

Course Name: Web Technology

CO No.	Course Outcomes (COs)
C304.1	Make use of markup languages like HTML and XHTML to build web pages.
C304.2	Develop dynamic web pages using DHTML and java script to interact with users.
C304.3	Build server side web pages that have to process request from client side web pages.
C304.4	Develop XML Representation of data and web pages using JSP.
C304.5	Identify web services and how these web services interact with clients.

Course Name: Software Engineering

CO No.	Course Outcomes (COs)
C305.1	Identify the key activities in managing a software project and compare different process models.
C305.2	Identify the concepts of requirements engineering and analysis modeling.
C305.3	Apply systematic procedure for software design and deployment.
C305.4	Select the relevant standards for coding, testing practices and Reengineering process model.
C305.5	Build project schedule, estimate project cost and effort required.

Course Name: Basics of Biomedical Instrumentation

CO No.	Course Outcomes (COs)
C306.1	Outline the different bio potential and its propagation
C306.2	Explain the different types of electrodes and its placement for various recording
C306.3	Explain bio amplifiers for various physiological recording
C306.4	Outline the different measurement techniques for non-physiological parameters.
C306.5	Explain the different biochemical measurements.

Course Name: Microprocessors and Microcontrollers Laboratory

CO No.	Course Outcomes (COs)
C307.1	Construct the basic operations such as arithmetic and logical operations, data block movement, code conversion and string operations using 8086 microprocessor.
C307.2	Develop various operations such as password checking, print RAM size and system date, counters and time delay using 8086 microprocessor.
C307.3	Build the interface of various peripheral chipsets with 8086 microprocessor.
C307.4	Construct the basic operations such as arithmetic and logical operations, 2's complement and code conversion and string operations using 8051 microcontroller.
C307.5	Build the basic operations Such as arithmetic and logical operations, square, cube and BCD to ASCII using MASM simulator.

Course Name: Networks Laboratory

CO No.	Course Outcomes (Cos)
C308.1	Implement protocols using TCP and UDP.
C308.2	Identify the performance of different transport layer protocols.
C308.3	Make Use of simulation tools to analyze the performance of various network protocols.
C308.4	Analyze different routing algorithms.
C308.5	Identify the error correction codes.

Course Name: Web Technology Laboratory

CO No.	Course Outcomes (COs)
C309.1	Make use of markup languages like HTML and XHTML to build web pages.
C309.2	Develop dynamic web pages using DHTML and java script to interact with users.
C309.3	Build server side web pages that have to process request from client side web pages.
C309.4	Develop XML Representation of data and web pages using JSP.
C309.5	Build web services for a given scenario.

Course Name: Computational Intelligence

CO No.	Course Outcomes (COs)
C310.1	Explain the basics to the goals and methods of Computational Intelligence.
C310.2	Make use of proposition and predicate logic to infer new knowledge using reasoning mechanisms
C310.3	Illustrate the usage of non-monotonic, fuzzy and neural networks to infer new knowledge under uncertainty
C310.4	Apply the Intelligent techniques for problem solving
C310.5	Develop problem solving skills through the acquired knowledge in the areas of reasoning, natural language processing and machine learning.

Course Name: Object Oriented Analysis and Design

CO No.	Course Outcomes (COs)
C311.1	Develop an Use Case Diagram for a given application.
C311.2	Apply Static UML concepts for a given software applications.
C311.3	Apply Dynamic and Implementation UML concepts for a given software applications.
C311.4	Make use of design patterns and transform the UML based software design into pattern-based design.
C311.5	Apply appropriate testing methodologies for generating test cases and test plans in OO software.

Course Name: Mobile Communication

CO No.	Course Outcomes (Cos)
C312.1	Explain the basics of mobile telecommunication system.
C312.2	Make use of the generations of telecommunication systems in wireless network along with the routing, mobility and security issues.
C312.3	Outline the architecture of Wireless LAN technologies.
C312.4	Utilize the functionality of network layer with their routing protocols and recognize the security issues related to Ad hoc networks.
C312.5	Explain the functionality of Transport and Application layer in a mobile network.

Course Name: Big Data Analytics

CO No.	Course Outcomes (COs)
C313.1	Explain the big data tools and its analysis techniques
C313.2	Apply various clustering and classification algorithms in data repository.
C313.3	Apply the association rules and recommendation systems for large volumes of data.
C313.4	Apply stream memory techniques in real time applications.
C313.5	Make use of NOSQL databases and visualization concepts for big data.

Course Name: Computer Graphics and Multimedia

CO No	Course Outcomes (COs)
C314.1	Identify appropriate color models and single dimensional object drawing algorithms for graphics.
C314.2	Apply two dimensional transformations, viewing techniques and clipping algorithms in 2D objects.
C314.3	Make use of three dimensional object representation, transformations and viewing techniques.
C314.4	Explain the basics of multimedia system architecture, databases, and compression and decompression techniques.
C314.5	Utilize the hypermedia and blender techniques for 3D graphics.

Course Name: Software Testing

CO No	Course Outcomes (COs)
C315.1	Infer the importance of testing, its principles, tester's role and spot the defects.
C315.2	Build the suitable test cases for the software development for different domains.
C315.3	Identify suitable testing levels to be carried out for different domains.
C315.4	Develop test plans based on the document and make the test group.
C315.5	Make use of automatic testing tools and validate the test plan.

Course Name: Mobile Application Development Laboratory

CO No	Course Outcomes (COs)
C316.1	Develop mobile applications using GUI and Layouts.
C316.2	Develop mobile applications using Event Listener.
C316.3	Develop mobile applications using Databases.
C316.4	Develop mobile applications using RSS Feed, Internal/External Storage, SMS, Multi-threading and GPS.
C316.5	Analyze and discover own mobile app for simple needs.

Course Name: Object Oriented Analysis and Design Laboratory

CO No	Course Outcomes (Cos)
C317.1	Apply OO analysis and design for a given problem specification and differentiate advance Object Oriented Approach from the traditional approach for design and development system
C317.2	Construct various UML Models using the appropriate notations
C317.3	Identify and map basic software requirements in UML
C317.4	Build the software quality using design patterns and to explain the rationale behind applying specific design patterns
C317.5	Develop the test cases for the compliance of the software with the SRS.

Course Name: Mini Project

CO No	Course Outcomes (Cos)
C318.1	Determine effective methodologies to solve real world problems.
C318.2	Identify and review the appropriate literature for exposure to similar solutions.
C318.3	Build project plans with feasible requirements.
C318.4	Analyze, design and build flexible and reusable solutions
C318.5	Organize the solutions for enhanced handling and provide scope for improvement.

Course Name: Professional Communication

CO No	Course Outcomes (COs)
C319.1	Demonstrate adequate Soft Skills which required for the workplace.
C319.2	Show the various technical presentations for interview skill
C319.3	Interpret in mock interview and interact in group discussions
C319.4	Outline professional etiquette
C319.5	Summarize the various technical conversation

Course Name: Principles of Management

CO No	Course Outcomes (COs)
C401.1	Apply basic managerial functions for an organization
C401.2	Build the planning process for an organization
C401.3	Identify the process of organization structure and HR management
C401.4	Summarize the individual and group behavior, motivation and leadership theories
C401.5	Develop various Controlling techniques to maintain standards in Organizations.

Course Name: Cryptography and Network Security

CO No	Course Outcomes (COs)
C402.1	Make use of classical encryption techniques to solve the problems.
C402.2	Apply symmetric cryptographic algorithms for performing encryption and decryption operations.
C402.3	Make use of asymmetric cryptographic algorithms to perform cryptographic operations.
C402.4	Identify authentication schemes for different applications.
C402.5	Utilize the security practices and system security standards.

Course Name: Cloud Computing

CO No	Course Outcomes (Cos)
C403.1	Understand the main concepts, key technologies, strengths and limitations of cloud computing.
C403.2	Apply the key and enabling technologies that help in the development of cloud.
C403.3	Identify the architecture of compute and storage cloud, service and delivery models.
C403.4	Identify the core issues of cloud computing such as resource management and security to model a cloud.
C403.5	Develop the skills to install current cloud technologies

Course Name: Waste Water Treatment

CO No	Course Outcomes (COs)
C404.1	Explain the importance of the water quality and the preliminary treatment process used in wastewater treatment.
C404.2	Summarize the basic concepts of industrial wastewater treatment
C404.3	Explain the role of conventional wastewater treatment processes
C404.4	Interpret the advancement in various wastewater treatment processes
C404.5	Classify the adsorption and oxidation process used in wastewater treatment

Course Name: Software Project Management

CO No	Course Outcomes (Cos)
C405.1	Understanding Project Planning and Evaluation principles.
C405.2	Apply adequate knowledge about software process models, software effort estimation techniques.
C405.3	Identify the risks involved in various project activities.
C405.4	Make use of checkpoints, project reporting structure, project progress and tracking mechanisms using project management principles.
C405.5	Outline about staffing in software projects and the issues related to people management.

Course Name: Human Computer Interaction

CO No	Course Outcomes (COs)
C406.1	Interpret the computer devices and HCI models.
C406.2	Develop software by using Interactive design techniques and HCI software process.
C406.3	Identify the stake holder's requirements and appropriate models related to human computer interaction.
C406.4	Develop mobile HCI using mobile elements and tools by considering mobile eco system.
C406.5	Build a meaningful user interface

Course Name: FOSS and Cloud Computing Laboratory

CO No	Course Outcomes (COs)
C407.1	Utilize various virtualization tools such as Virtual Box, VMware workstation
C407.2	Construct and deploy a web application in a PaaS environment
C407.3	Install and use a generic cloud environment that can be used as a private cloud
C407.4	Apply simulation in cloud environment for implementing new schedulers
C407.5	Make use of large data sets in a parallel environment

Course Name: Security Laboratory

CO No	Course Outcomes (Cos)
C408.1	Develop code for classical Encryption Techniques to solve the problems.
C408.2	Build cryptosystems by applying symmetric and public key encryption algorithms.
C408.3	Construct code for authentication algorithms.
C408.4	Develop a signature scheme using Digital signature standard.
C408.5	Construct the network security system using open source tools.

Course Name: Professional Ethics in Engineering

CO No	Course Outcomes (Cos)
C409.1	Illustrate the core values that enrich the ethical behavior of an engineer
C409.2	Discuss the importance of moral issues and theories of the profession.
C409.3	Identify how engineering is applied in association with ethics based on engineering experimentation
C409.4	Relate the suitable safety measures towards risk benefit analysis
C409.5	Explain the global ethical issues related to various work place situations.

Course Name: Information Retrieval Techniques

CO No	Course Outcomes (Cos)
C410.1	Explain the fundamentals of Information Retrieval.
C410.2	Make use of modeling and retrieval evaluation techniques in datastore.
C410.3	Apply appropriate method of classification and clustering.
C410.4	Make use of ranking algorithms for web retrieval and crawling.
C410.5	Analyze recommender system techniques for data retrieval.

Course Name: Project Work

CO No	Course Outcomes (Cos)
C411.1	Identify the problem by applying acquired knowledge.
C411.2	Analyze and categorize executable project modules after considering risks.
C411.3	Choose efficient tools for designing project modules.
C411.4	Evaluate all the modules through effective team work after efficient testing.
C411.5	Elaborate the completed task and compile the project report.