DADI INSTITUTE OF ENGINEERING & TECHNOLOGY

An Autonomous Institute

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I-I DR-23

Linear Algebra & Calculus

- Develop matrix algebra techniques that are needed by engineers for practical applications.
- To find the eigen values and eigen vectors and solve the problems transformation
- Learn important tools of calculus in higher dimensions.
- Familiarize with functions of several variables which is useful in optimization.
- by using linear
- Familiarize with double and triple integrals of functions of several variables in two and three dimensions.

Engineering Physics

- Analyze the intensity variation of light due to polarization, interference and diffraction.
- Familiarize with the basics of crystals and their structures.
- Explain fundamentals of quantum mechanics and apply it to one dimensional motion of particles.
- Summarize various types of polarization of dielectrics and classify the magnetic materials.
- Explain the basic concepts of Quantum Mechanics and the band theory of solids.
- Identify the type of semiconductor using Hall effect.

COMMUNICATIVE ENGLISH

- Learned how to understand the context, topic, and specific information from social or transactional dialogues.
- Remedially learn applying grammatical structures to formulate sentence sand use appropriate words and correct word forms.
- Using discourse markers to speak clearly on a specific topic in formal as well as informal discussions.(not required)
- Improved communicative competence in formal and informal contexts and for social and academic purposes.
- Critically comprehending and appreciating eading /listening texts and to write summaries based on global comprehension of these texts.
- Writing coherent paragraphs essays, letters/e-mails and resume.

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BASIC CIVIL & MECHANICAL ENGINEERING

- Understand various sub-divisions of Civil Engineering and to appreciate their role in ensuring better society.
- Know the concepts of surveying and to understand the measurement of distances, angles and levels through surveying.
- Realize the importance of Transportation in nation's economy and the engineering measures related to Transportation.
- Understand the importance of Water Storage and Conveyance Structures so that the social responsibilities of water conservation will be appreciated.
- Understand the basic characteristics of Civil Engineering Materials and attain knowledge on prefabricated technology.
- Understand the different manufacturing processes.
- Explain the basics of thermal engineering and its applications.
- Describe the working of different mechanical power transmission systems and power plants.
- Describe the basics of robotics and its applications.

Introduction To C Programming

- Illustrate the Fundamental concepts of Computers and basics of computer programming and problem-solving approach
- Understand the Control Structures, branching and looping statements
- Use of Arrays and Pointers in solving complex problems.
- Develop Modular program aspects and Strings fundamentals.
- Demonstrate the ideas of User Defined Data types, files.
- Solve real world problems using the concept of Structures, Unions and File operations.

COMMUNICATIVE ENGLISH LAB

- Understand the different aspects of the English language oral communication with emphasis on Listening and Speaking S skills.
- Apply communication skills through various language learning activities.
- Analyze the English speech sounds, stress, rhythm and intonation for better listening and speaking comprehension.

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- Evaluate and exhibit professionalism in participating in debates and group discussions with polite turn taking strategies and sound more professional while communicating with others
- Create effective resonate and prepare them to face interviews communicate appropriately in corporate settings.

ENGINEERING PHYSICS LAB

- Operate optical instruments like travelling microscope and spectrometer.
- Estimate the wavelengths of different colours using diffraction grating.
- Plot the intensity of the magnetic field of circular coil carrying current with distance.
- Evaluate dielectric constant and magnetic susceptibility for dielectric and magnetic materials respectively.
- Calculate the band gap of a given semiconductor.
- Identify the type of semiconductor using Hall effect.

ENGINEERING WORKSHOP

- Identify workshop tools and their operational capabilities.
- Practice on manufacturing of components using workshop trades including fitting, carpentry, foundry and welding.
- Apply fitting operations in various applications.
- Apply basic electrical engineering knowledge for House Wiring Practice

IT WORKSHOP

- Perform Hardware troubleshooting.
- Understand Hardware components and inter dependencies.
- Safeguard computer systems from viruses/worms.
- Document/ Presentation preparation.
- Perform calculations using spreadsheets.

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COMPUTER PROGRAMMING LAB

- Read, understand, and trace the execution of programs written in C language.
- Select the right control structure for solving the problem.
- Develop C programs which utilize memory efficiently using programming constructs like pointers.
- Develop, Debug and Execute programs to demonstrate the applications of arrays, functions, basic concepts of pointers in C.

HEALTH AND WELLNESS, YOGA AND SPORTS

- Understand the importance of yoga and sports for Physical fitness and sound health.
- Demonstrate an understanding of health-related fitness components.
- Compare and contrast various activities that help enhance their health.
- Assess current personal fitness levels.
- Develop Positive Personality

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I-II DR-23

DIFFERENTIAL EQUATIONS AND VECTOR CALCULUS

- solve the differential equations related to various engineering fields.
- model engineering problems as higher order differential equations and solve analytically.
- identify solution methods for partial differential equations that model physical processes.
- interpret the physical meaning of different operators such as gradient, curl and divergence.
- estimate the work done against a field, circulation and flux using vector calculus.

CHEMISTRY
- Compare the materials of construction for battery and electrochemical sensors.
- Explain the preparation, properties, and applications of thermoplastics & thermosetting & elastomers conducting polymers.
- Explain the principles of spectrometry, slc in separation of solid and liquid mixtures.
- Apply the principle of Band diagrams in the application of conductors and semiconductors.
- Summarize the concepts of Instrumental methods.

Engineering Graphics
- Understand the principles of engineering drawing, including engineering curves, scales, orthographic and isometric projections.

- Draw and interpret orthographic projections of points, lines, planes and solids in front, top and side views.

- Understand and draw projection of solids in various positions in first quadrant.

- Explain principles behind development of surfaces.

- Prepare isometric and perspective sections of simple solids.

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Basic Electrical & Electronics Engineering

- Remember the fundamental laws, operating principles of motors, generators, MC and MI instruments.
- Understand the problem solving concepts associated to AC and DC circuits, construction and operation of AC and DC machines, measuring instruments; different power generation mechanisms, Electricity billing concept and important safety measures related to electrical operations.
- Apply mathematical tools and fundamental concepts to derive various equations related to machines, circuits and measuring instruments; electricity bill calculations and layout representation of electrical power systems.
- Analyze different electrical circuits, performance of machines and measuring instruments.
- Evaluate different circuit configurations, Machine performance and Power systems operation.

DATA STRUCTURES

- Explain the role of linear data structures in organizing and accessing data efficiently in algorithms.

- Design, implement, and apply linked lists for dynamic data storage, demonstrating understanding of memory allocation.

- Develop programs using stacks to handle recursive algorithms, manage program states, and solve related problems.

- Apply queue-based algorithms for efficient task scheduling and breadth-first traversal in graphs and distinguish between deques and priority queues, and apply them appropriately to solve data management challenges.

- Devise novel solutions to small scale programming challenges involving data structures such as stacks, queues, Trees

- Recognize scenarios where hashing is advantageous, and design hash-based solutions for specific problems.

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Chemistry Lab

- Determine the cell constant and conductance of solutions.
- Prepare advanced polymer Bakelite materials.
- Measure the strength of an acid present in secondary batteries.
- Analyse the IR spectra of some organic compounds.
- Calculate strength of acid in Pb-Acid battery.

Electrical & Electronics Engineering Workshop

- Understand the Electrical circuit design concept; measurement of resistance, power, power factor; concept of wiring and operation of Electrical Machines and Transformer.
- Apply the theoretical concepts and operating principles to derive mathematical models for
- circuits, Electrical machines and resistance, power and power factor measuring instruments; calculations for the measurement of
- Apply the theoretical concepts to obtain calculations for the measurement of resistance,power and power factor.
- Analyse various characteristics of electrical circuits, electrical machines instruments and measuring
- Design suitable circuits and methodologies for the measurement of various electrical parameters; Household and commercial wiring.

- Identify & testing of various electronic components.

- Understand the usage of electronic measuring instruments.

- Plot and discuss the characteristics of various electron devices.

- Explain the operation of a digital circuit.

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DATA STRCTURES LAB

- Create and manage linked lists to efficiently organize and manipulate data, emphasizing memory efficiency.

- Implement and apply stacks to manage program flow and solve problems involving expression evaluation and backtracking.

- Utilize queues to model real-world scenarios, such as process scheduling and breadth first search algorithms and understand the versatility of deques and prioritize data management using priority queues.

- Impart basic understanding of non-linear data structures such as trees.

- Explore basic concepts of hashing and apply it to solve problems requiring fast data retrieval and management.

NSS/NCC/SCOUTS & GUIDES/COMMUNITY SERVICE

- Understand the importance of discipline, character and service motto.

- Solve some societal issues by applying acquired knowledge, facts, and techniques.

- Explore human relationships by analyzing social problems.

- Determine to extend their help for the fellow beings and downtrodden people.

- Develop leadership skills and civic responsibilities

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II-I DR23

MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE

- Recall the concepts of Mathematical logic and statement & predicate calculus
- Recall the concepts of combinatorics, set theory, posets and lattices
- Recall the concepts of algebraic structures, recurrence relations and generating functions
- Use and interpret the concepts of Mathematical logic and statement & predicate calculus.
- Use and interpret the concepts of combinatorics, set theory, posets and lattices
- Use and interpret the concepts of algebraic structures, recurrence relations and generating functions
- Apply the concepts of discreet mathematical structures to computer science and engineering

UNIVERSAL HUMAN VALUES – UNDERSTANDING HARMONY AND ETHICAL HUMAN CONDUCT

- Define the terms like Natural Acceptance, Happiness and Prosperity
- Identify one's self, and one's surroundings (family, society nature)
- Apply what they have learnt to their own self in different day-to-day settings in real life.
- Relate human values with human relationship and human society.
- Justify the need for universal human values and harmonious existence
- Develop as socially and ecologically responsible engineers

DIGITAL LOGIC & COMPUTER ORGANIZATION

- Differentiate between combinational and sequential circuits based on their characteristics and functionalities.
- Demonstrate an understanding of computer functional units.
- Analyze the design and operation of processors, including instruction execution, pipelining, and control unit mechanisms, to comprehend their role in computer systems.
- Describe memory hierarchy concepts, including cache memory, virtual memory, and secondary storage, and evaluate their impact on system performance and scalability.

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- Explain input/output (I/O) systems and their interaction with the CPU, memory, and peripheral devices, including interrupts, DMA, and I/O mapping techniques.

SOFTWARE ENGINEERING

- Perform various life cycle activities like Analysis, Design, Implementation, Testing and Maintenance
- Analyse various software engineering models and apply methods for design and development of software projects.
- Develop system designs using appropriate techniques.
- Understand various testing techniques for a software project.
- Apply standards, CASE tools and techniques for engineering software projects

OBJECT ORIENTED PROGRAMMING THROUGH JAVA

- Analyze problems, design solutions using OOP principles, and implement them efficiently in Java.
- Design and implement classes to model real-world entities, with a focus on attributes, behaviours, and relationships between objects.
- Demonstrate an understanding of inheritance hierarchies and polymorphic behaviour, including method overriding and dynamic method dispatch.
- Apply Competence in handling exceptions and errors to write robust and fault-tolerant code.
- Perform file input/output operations, including reading from and writing to files using Java I/O classes, graphical user interface (GUI) programming using JavaFX.

CASE TOOLS LAB

- Practical exposure to all **phases of software development** (from requirements to testing).
- Experience with **CASE tools** used in the industry.
- The ability to **produce professional documentation** (SRS, design, test plan, SCM, risk management).
- A solid foundation in **software process management and quality assurance.**

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OBJECT ORIENTED PROGRAMMING THROUGH JAVA LAB

- Demonstrate a solid understanding of Java syntax, including data types, control structures, methods, classes, objects, inheritance, polymorphism, and exception handling.
- Apply fundamental OOP principles such as encapsulation, inheritance, polymorphism, and abstraction to solve programming problems effectively.
- Familiar with commonly used Java libraries and APIs, including the Collections Framework, Java I/O, JDBC, and other utility classes.
- Develop problem-solving skills and algorithmic thinking, applying OOP concepts to design efficient solutions to various programming challenges.
- Proficiently construct graphical user interface (GUI) applications using JavaFX.

PYTHON PROGRAMMING

- showcase adept command of Python syntax, deftly utilizing variables, data types, control structures, functions, modules, and exception handling to engineer robust and efficient code solutions.
- apply Python programming concepts to solve a variety of computational problems
- understand the principles of object-oriented programming (OOP) in Python, including classes, objects, inheritance, polymorphism, and encapsulation, and apply them to design and implement Python programs
- become proficient in using commonly used Python libraries and frameworks such as JSON, XML, NumPy, pandas
- exhibit competence in implementing and manipulating fundamental data structures such as lists, tuples, sets, dictionaries

ENVIRONMENTAL SCIENCE
- Explain the scope, importance, and multidisciplinary nature of environmental studies.
- Identify natural resources, their uses, and suggest sustainable management practices.
- Describe ecosystem structure, function, and the importance of biodiversity conservation.
- Identify causes and control measures of major types of environmental pollution.
- Discuss social issues, environmental ethics, and relevant environmental laws.
- Analyze the relationship between population, health, and environment, and the role of technology in sustainability.
- Apply knowledge through fieldwork to observe and document local environmental conditions.

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II-II DR23

MANAGERIAL ECONOMICS AND FINANCIAL ANALYSIS

- Define the concepts related to Managerial Economics, financial accounting and management.
- Understand the fundamentals of Economics viz., Demand, Production, cost, revenue and markets.
- Apply the Concept of Production cost and revenues for effective Business decision.
- Analyze how to invest their capital and maximize returns.
- Evaluate the capital budgeting techniques.
- Develop the accounting statements and evaluate the financial performance of business entity.

PROBABILITY & STATISTICS

- Acquire knowledge in finding the analysis of the data quantitatively or categorically and various statistical elementary tools
- Develop skills in designing mathematical models involving probability, random variables and the critical thinking in the theory of probability and its applications in real life problems.
- Apply the theoretical probability distributions like binomial, Poisson, and Normal in the relevant application areas.
- Analyze to test various hypotheses included in theory and types of errors for large samples.
- Apply the different testing tools like t-test, F-test, chi-square test to analyze the relevant real-life problems.

OPERATING SYSTEMS

- Describe the basics of the operating systems, mechanisms of OS to handle processes, threads, and their communication.
- Understand the basic concepts and principles of operating systems, including process management, memory management, file systems, and Protection.

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- Make use of process scheduling algorithms and synchronization techniques to achieve better performance of a computer system.
- Illustrate different conditions for deadlock and their possible solutions.
- Analyze the memory management and its allocation policies.

DATABASE MANAGEMENT SYSTEMS
- Understand the basic concepts of database management systems
- Analyze a given database application scenario to use ER model for conceptual design of the database.
- Utilize SQL proficiently to address diverse query challenges
- Employ normalization methods to enhance database structure
- Assess and implement transaction processing, concurrency control and database recovery protocols in databases.

FORMAL LANGUAGES AND AUTOMATA THEORY

- Classify machines by their power to recognize languages.
- Summarize language classes & grammars relationship among them with the help of Chomsky hierarchy
- Employ finite state machines to solve problems in computing
- Illustrate deterministic and non-deterministic machines
- Quote the hierarchy of problems arising in the computer science

OPERATING SYSTEMS LAB

- Trace different CPU Scheduling algorithms
- Implement Bankers Algorithms to Avoid the Dead Lock
- Evaluate Page replacement algorithms
- Illustrate the file organization techniques
- Illustrate Inter process Communication and concurrent execution of threads

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DATABASE MANAGEMENT SYSTEMS LAB

- Utilizing Data Definition Language (DDL), Data Manipulation Language (DML), and Data Control Language (DCL) commands effectively within a database environment
- Constructing and execute queries to manipulate and retrieve data from databases.
- Develop application programs using PL/SQL.
- Analyze requirements and design custom Procedures, Functions, Cursors, and Triggers, leveraging their capabilities to automate tasks and optimize database functionality
- Establish database connectivity through JDBC (Java Database Connectivity)

FULL STACK DEVELOPMENT – 1

- Design Websites.
- Apply Styling to web pages.
- Make Web pages interactive.
- Design Forms for applications.
- Choose Control Structure based on the logic to be implemented.

DESIGN THINKING & INNOVATION

- Define the concepts related to design thinking.
- Explain the fundamentals of Design Thinking and innovation
- Apply the design thinking techniques for solving problems in various sectors.
- Analyse to work in a multidisciplinary environment
- Evaluate the value of creativity
- Formulate specific problem statements of real time issues

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III-I (R20)

Computer Networks

- Demonstrate different network models for networking links OSI, TCP/IP, B-ISDN, N-BISDN and get knowledge about various communication techniques, methods and protocol standards.
- Discuss different transmission media and different switching networks.
- Analyze data link layer services, functions and protocols like HDLC and PPP.
- Compare and Classify medium access control protocols like ALOHA, CSMA, CSMA/CD,CSMA/CA, Polling, Token passing, FDMA, TDMA, CDMA protocols
- Determine application layer services and client server protocols working with the client server paradigms like WWW, HTTP, FTP, e-mail and SNMP etc.

DESIGN AND ANALYSIS OF ALGORITHMS

- Analyze the performance of a given algorithm, denote its time complexity using the asymptotic notation for recursive and non-recursive algorithms
- List and describe various algorithmic approaches and Solve problems using divide and conquer & greedy Method
- Synthesize efficient algorithms dynamic programming approaches to solve in common engineering design situations.
- Organize important algorithmic design paradigms and methods of analysis: backtracking, branch and bound algorithmic approaches
- Demonstrate NP- Completeness theory ,lower bound theory and String Matching

DATA WAREHOUSING AND DATA MINING

- Illustrate the importance of Data Warehousing, Data Mining and its functionalities and Design schema for real time data warehousing applications.
- Demonstrate on various Data Preprocessing Techniques viz. data cleaning, data integration, data transformation and data reduction and Process raw data to make it suitable for various data mining algorithms.

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- Choose appropriate classification technique to perform classification, model building and evaluation.
- Make use of association rule mining techniques viz. Apriori and FP Growth algorithms and analyze on frequent itemsets generation.
- Identify and apply various clustering algorithm (with open source tools), interpret, evaluate and report the result.

SOFTWARE PROJECT MANAGEMENT

- Apply the process to be followed in the software development life-cycle models
- Apply the concepts of project management & planning
- Implement the project plans through managing people, communications and change
- Conduct activities necessary to successfully complete and close the Software projects Implement communication, modeling, and construction & deployment practices in software development

IOT and Applications

- Understand internet of Things and its hardware and software components.
- Interface I/O devices, sensors & communication modules.
- Remotely monitor data and control devices.
- Design real time IoT based applications

DATA WAREHOUSING AND DATA MINING LAB

- Design a data mart or data warehouse for any organization
- Extract knowledge using data mining techniques and enlist various algorithms used in information analysis of Data Mining Techniques
- Demonstrate the working of algorithms for data mining tasks such as association rule mining, classification for realistic data
- Implement and Analyze on knowledge flow application on data sets and Apply the suitable visualization techniques to output analytical results

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COMPUTER NETWORKS LAB

- Know how reliable data communication is achieved through data link layer.
- Suggest appropriate routing algorithm for the network.
- Provide internet connection to the system and its installation.
- Work on various network management tools

CONTINUOUS INTEGRATION AND CONTINUOUS DELIVERY USING DevOps

- Understand the why, what and how of DevOps adoption
- Attain literacy on Devops
- Align capabilities required in the team
- Create an automated CICD pipeline using a stack of tools

EMPLOYABILITY SKILLS-I

- Understand the corporate etiquette.
- Make presentations effectively with appropriate body language
- Be composed with positive attitude
- Understand the core competencies to succeed in professional and personal life

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III-II (R20)

MACHINE LEARNING

- Explain the fundamental usage of the concept Machine Learning system Demonstrate on various regression Technique
- Analyze the Ensemble Learning Methods
- Illustrate the Clustering Techniques and Dimensionality Reduction Models in Machine Learning.
- Discuss the Neural Network Models and Fundamentals concepts of Deep Learning

COMPILER DESIGN

- Demonstrate phases in the design of compiler Organize Syntax Analysis, Top Down and LL(1) grammars
- Design Bottom Up Parsing and Construction of LR parsers
- Analyze synthesized, inherited attributes and syntax directed translation schemes
- Determine algorithms to generate code for a target machine

CRYPTOGRAPHY AND NETWORK SECURITY

- Explain different security threats and countermeasures and foundation course of cryptography mathematics.
- Classify the basic principles of symmetric key algorithms and operations of some symmetric key algorithms and asymmetric key cryptography
- Revise the basic principles of Public key algorithms and Working operations of some asymmetric keyalgorithms such as RSA, ECC and some more
- Design applications of hash algorithms, digital signatures and key management techniques
- Determine the knowledge of Application layer, Transport layer and Network layer security Protocols such as PGP, S/MIME, SSL,TSL, and IPsec .

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Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

Website: **www.diet.edu.in**, **9963993229** E-mail:, **principal@diet.edu.in**

OBJECT ORIENTED ANALYSIS AND DESIGN

- Analyze the nature of complex system and its solutions.
- Illustrate & relate the conceptual model of the UML, identify & design the classes and relationships
- Analyze & Design Class and Object Diagrams that represent Static Aspects of a Software System and apply basic and Advanced Structural Modeling Concepts for designing real time applications.
- Analyze & Design behavioral aspects of a Software System using Use Case, Interaction and Activity Diagrams.
- Analyze & Apply techniques of State Chart Diagrams and Implementation Diagrams to model behavioral aspects and Runtime environment of Software Systems.

Digital Logic design

- Classify different number systems and apply togenerate various codes.
- Use the concept of Boolean algebra in minimization of switching functions
- Design different types of combination allogic circuits.
- Apply knowledge offlip-flops in designing of Registers and counters
- The operation and design methodology for synchronous sequential circuits and algorithmic state machines
- Produce innovative designs by modifying the traditional design techniques

MACHINE LEARNING USING PYTHON LAB

- Implement procedures for the machine learning algorithms
- Design and Develop Python programs for various Learning algorithms
- Apply appropriate data sets to the Machine Learning algorithms
- Develop Machine Learning algorithms to solve real world problems

COMPILER DESIGN LAB

- Design simple lexical analyzers
- Determine predictive parsing table for a CFG

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- Apply Lex and Yacc tools
- Examine LR parser and generating SLR Parsing table
- Relate Intermediate code generation for subset C language

CRYPTOGRAPHY NETWORK SECURITY LAB

- Apply the knowledge of symmetric cryptography to implement encryption and decryption using Ceaser Cipher, Substitution Cipher, Hill Cipher
- Demonstrate the different algorithms like DES, BlowFish, and Rijndael, encrypt the text "Hello world" using Blowfish Algorithm.
- Analyze and implement public key algorithms like RSA, Diffie-Hellman Key Exchange mechanism, the message digest of a text using the SHA-1 algorithm

MEAN STACK TECHNOLOGIES-MODULE I

- Develop professional web pages of an application using HTML elements like lists, navigations, tables, various form elements, embedded media which includes images, audio, video and CSS Styles.
- Utilize JavaScript for developing interactive HTML web pages and validate form data.
- Build a basic web server using Node.js and also working with Node Package Manager (NPM) Build a web server using Express.js
- Make use of Typescript to optimize JavaScript code by using the concept of strict type checking.

EMPLOYABILITY SKILLS-II

- Solve various Basic Mathematics problems by following different methods
- Follow strategies in minimizing time consumption in problem solving Apply shortcut methods to solve problems
- Confidently solve any mathematical problems and utilize these mathematical skills both in their professional as well as personal life.
- Analyze, summarize and present information in quantitative forms including table, graphs and formulas

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IV-I (R20)

SOCIAL NETWORKS & SEMANTIC WEB

- Demonstrate social network analysis and measures.
- Analyze random graph models and navigate social networks data
- Apply the network topology and Visualization tools.
- Analyze the experiment with small world models and clustering models.
- Compare the application driven virtual communities from social network Structure

BLOCK-CHAIN TECHNOLOGIES

- Demonstrate the block chain basics, Crypto currency
- To compare and contrast the use of different private vs. public block chain and use cases
- Design an innovative Bit coin Block chain and scripts, Block chain Science on varies coins
- Classify Permission Block chain and use cases – Hyper ledger, Corda
- Make Use of Block-chain in E-Governance, Land Registration, Medical Information Systems and others

UNIVERSAL HUMAN VALUES 2: UNDERSTANDING HARMONY

- students are expected to become more aware of themselves, and their surroundings (family, society, nature);
- they would become more responsible in life, and in handling problems with sustainable solutions, while keeping human relationships and human nature in mind.
- They would have better critical ability.
- They would also become sensitive to their commitment towards what they have understood (human values, human relationship and human society).
- It is hoped that they would be able to apply what they have learnt to their own self in different day-to-day settings in real life, at least a beginning would be made in this direction.

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Cloud Computing

- Illustrate the key dimensions of the challenge of Cloud Computing
- Classify the Levels of Virtualization and mechanism of tools.
- Analyze Cloud infrastructure including Google Cloud and Amazon Cloud.
- Create Combinatorial Auctions for cloud resource and design scheduling algorithms for computing cloud
- Assess control storage systems and cloud security, the risks involved its impact and develop cloud application

Consumer Electronics

- Understand the various type of microphones and loud speakers.
- To identify the various digital and analog signal.
- Describe the basis of television and composite video signal.
- Describe the various kind of colour TV standards and system.
- Compare the various types of digital TV system.
- Understand the various type of consumer goods.

Fundamentals of Electric Vehicles

- Illustrate different types of electric vehicles.
- Select suitable power converters for EV applications.
- Design HEV configuration for a specific application.
- Choose an effective method for EV and HEV applications.
- Analyse a battery management system for EV and HEV.

Dr. R Vaikunta Rao
Principal
Dadi Institute of Engineering &Technology
Autonomous
Anakapalle - 531002