COURSE OUTCOMES

GR15A1001-Linear Algebra and Single Variable Calculus-B.Tech I Year I Semester
Course Outcomes
1. Recognize the concepts of matrix rank to analyze linear algebraic systems 2. Compute Eigen values and vectors for engineering applications. 3. Illustrate the concepts of Mean Value Theorems to Describe the Medical Imaging and Industrial Automation. 4. Differentiate various differential equations using elementary techniques (Exact or linear constant coefficient equations) 5. Demonstrate model and solve linear dynamical systems. 6. Apply concepts of higher order differential equations to solve typical problems in Electrical circuits. 7. Identify the physical phenomena of Simple harmonic motion by concepts of Differential equations

GR15A1002-Advanced Calculus-B.Tech I Year I Semester
Course Outcomes
1. Solve problems on function optimization with and without constraints. 2. Apply the knowledge of curve tracing and geometry to precisely estimate areas and volumes. 3. Classify the concepts of applications of integration. 4. Explain the real significance of applications of multiple integrals. 5. Apply the knowledge of multiple integrals in solving problems in vector fields 6. Classify the concepts of differential calculus with physical interpretation. 7. Categorize the verification and evaluation of vector integral theorems geometrically

GR15A1005-English-B.Tech I Year I Semester
Course Outcomes
1. Identify and compare a wide range of text to know the importance of lifelong learning. 2. Relate and develop English language proficiency with an emphasis on LSRW skills. 3. Infer and interrelate academic subjects through English language skills for better understanding of technical intricacies.. 4. Organize ideas appropriately and fluently in social and professional areas. 5. Implement English language skills to meet the corporate needs. 6. Translate and demonstrate self in social and professional situations. 7. Distinguish and construct literary sense through wide range of selections from various genres.

GR15A1007-Engineering Physics-B.Tech I Year I Semester
Course Outcomes
1. Identify and describe various bonds between the atoms and properties of various materials. 2. Explain the behavior of free electrons and how they are responsible for exhibition of various properties. 3. Classify various magnetic materials and apply knowledge gained in various fields. 4. Differentiate different dielectric materials and its utilization. 5. Analyze why Laser light is more powerful than normal light and its applications in various fields. 6. Demonstrate the application of optical fibers in communication. 7. Extend the knowledge of characterization techniques to know the composition of Nano material.

GR15A1009-Computer Programming-B.Tech I Year I Semester
Course Outcomes
1. Comprehend the basic concepts of computers, software, hardware, generations of programming languages, program development steps, algorithms, flowcharts. 2. Comprehend the pre-programming C-concepts such as C-Tokens like keywords, data-types. 3. Comprehend the concepts of operators, evaluation of expressions, I/O statements. 4. Analyze the concepts of decision making such as branching, looping, unconditional jumping. 5. Comprehend the C-language features such as arrays, strings, functions, pointers, structures, files. 6. Design and develop C-Programs for various general problems and their implementation. 7. Design and develop C-Programs for Complex problems independently

GR15A1019-Fundamentals of Electronics Engineering-B.Tech I Year I Semester
Course Outcomes
1. Comprehend the fundamentals of construction of the semiconducting material, fabrication of elements, working principles and operation of semiconductors. 2. Analyze the concept with the working principles of forward and reverse bias characteristics. 3. Demonstrate the basic skills in design and analysis of filter circuits, biasing circuits. 4. Discriminate the principle, construction and operation of BJTs, FETs and MOSFETs.

5. Interpret the different techniques for FET and MOSFET circuit designs.

6. Interpret the performance and analysis-volt amp characteristics of BJT and FET amplifiers.

7. Analyze the small signal low frequency Transistor amplifiers using h-parameters.

GR15A1025-Engineering Workshop-B.Tech I Year I Semester
Course Outcomes
1. Design and model different prototypes in the Carpentry trade such as Cross lap joint, Dove tail joint. 2. Demonstrate straight fit, V-fit by making models. 3. Construct various basic prototypes in the trade of tin smithy such as rectangular tray and open scoop etc. 4. Analyze to make in the trade of Tin Smithy such as Rectangular tray and Open Cylinder. 5. Apply various House Wiring techniques such as connecting one lamp with one switch. 6. Develop various basic house wiring techniques such as two lamps with one switch, connecting a Fluorescent tube, Series Wiring, Go down wiring 7. Demonstrate to develop various basic prototypes in the trade of Welding such as Lap joint, Lap Tee joint, Butt joint and Corner joint.

GR15A1027-Computer Programming Lab-B.Tech I Year I Semester
Course Outcomes
1. Analyze and debug a given program 2. Use basic concepts, decision making and looping and c library functions for program development. 3. Develop programs using arrays and strings. 4. Illustrate recursive and non recursive programming approaches. 5. Apply concepts of pointers and dynamic memory allocation for program development. 6. Apply fundamental, derived or user defined data types for problem solving. 7. Experiment files operations and demonstrates command line arguments.

GR15A1029-Engineering Physics Lab -B.Tech I Year I Semester
Course Outcomes
1. Identify the usage of CRO, digital multi meter to record various physical quantities. 2. Distinguish the characteristics and behavior of dielectric materials in a practical manner. 3. Calculate losses in optical fiber and interpret them to the optical communication systems. 4. Quantify the type of semiconductor and measurement of energy gap in a semiconductor. 5. Investigate the properties of light like interference and diffraction through experimentation.

6. Examine the behavior of magnetic materials with the help of graph.
7. Analyze the characteristics of light emitting diodes for their optimum utilization.

GR15A1003-Transform Calculus and Fourier Series-B. Tech I Year II Semester
Course Outcomes
1. Calculate definite integral values using Beta and Gamma Functions 2. 2. Develop the skill of evaluating Laplace and inverse Laplace transform to solve linear systems under initial and boundary conditions. 3. Illustrate the concepts of Laplace Transform to find the solutions of physical problems such as Electrical circuits. 4. Interpret the Fourier series and Fourier transform in the context of signals and systems. 5. Solve difference equations by Z-Transform. 6. Formulate Partial differential equations by eliminating arbitrary functions and arbitrary constants. 7. Compile the solution of Boundary value problems (PDE) by Fourier Transform Method.

GR15A1004-Numerical Methods-B.Tech I Year II Semester
Course Outcomes
1. Develop the skill of determining approximate solutions to problems having no analytical solutions in different contexts. 2. Solve problems related to cubic spline fitting and approximation of functions using B- splines and least squares. 3. Develop the skill of finding approximate solutions to problems arising in linear differential equations. 4. Identify how the numerical methods play a vital role in many areas in engineering for example Dynamics, elasticity, heat transfer, electromagnetic theory and quantum mechanics. 5. Interpret the mathematical results in physical or other terms to see what it practically means and implies. 6. Explain the concept of interpolation is useful in predicting future out comes base on the present knowledge. 7. Solve the model by selecting and applying a suitable mathematical method.

GR15A1018-Basic Electrical Engineering-B.Tech I Year II Semester
Course Outcomes
1. Comprehend the basics of Electrical Engineering and practical implementation of Electrical fundamentals. 2. Illustrate applications of commonly used electric machinery. 3. Identify the methods for numerical solutions to fundamental electrical engineering. 4. Apply the basic principles involved in electrical engineering concepts.

5. Analyze the practical methods of basic house wiring.
6. Identify methods to solve AC circuits.
7. Comprehend basics of electric machines like induction motors, generators, transformers etc. used in industries.

GR15A1008-Engineering Chemistry-B.Tech I Year II Semester
Course Outcomes
1. Analyze water for the industry required specifications. 2. Comprehend the fundamental principles of electrochemistry for energy production and corrosion Prevention. 3. Identify the origin of different types of engineering materials used in modern technology. 4. Identify new materials for novel applications. 5. Develop the skills required for synthesis and analysis of materials. 6. Relate the structure of materials to their properties and applications. 7. Illustrate the processing of fossil fuels for the effective utilization of chemical energy and the necessity of sustainable, environmentally-friendly energy sources like solar energy

GR15A1023-Engineering Graphics-B.Tech I Year II Semester
Course Outcomes
1. Demonstrate different types of lines, the use of different types of pencils and drafter to represent 2. Illustrate the basic drawing techniques, conic sections, cycloid curves, involutes and engineering 3. Comprehend the basic concept of principle of planes of projections in front view and top view. 4. Implement the orthographic projections of points, lines, planes and solids 5. Analyze the structure which was hypostatically designed ex: development of surfaces 6. Explain the logic to convert pictorial views to orthographic projections and orthographic projections. 7. Evaluate conversions of isometric views to orthographic views helps in inventing new machinery.

GR15A1010-Data Structures-B.Tech I Year II Semester
Course Outcomes
1. Classify and infer various data structures. 2. Demonstrate operations like insert, delete, search and display of various data structures. 3. Exemplify and experiment applications of various data structures. 4. List applications of data structures in real time environments. 5. Compare and contrast static and dynamic data structure implementations. 6. Demonstrate different methods of traversing trees and construct trees from traversals. 7. Implement searching and sorting techniques and analyze their performance.

GR15A1026-IT Workshop-B.Tech I Year II Semester
Course Outcomes
1. Recognize different peripherals and install different system and application software. 2. Analyze and use of web browsers and related tools. 3. Create different documents, presentations and spreadsheet applications. 4. Recognize different network devices and their usage and identify and use different cables. 5. Explore the internet for information extraction and other innovative applications. 6. Design a static webpage. 7. Design and develop database.

GR15A1030-Engineering Chemistry Lab-B.Tech I Year II Semester
Course Outcomes
1. Perform analysis of water to the required industrial standards. 2. Apply the redox and acid-base titrations for analyzing materials used in routine usage like cement, coal, acid in lead acid battery, etc., 3. Develop the skills required for assessing the quality of materials used in industries. 4. Identify novel ways of instrumental methods of analysis. 5. Identify the correlation between the measured property and the corresponding application. 6. Comprehend scientific method of designing experiment and learn the skill necessary to perform it. 7. Illustrate how to innovate to design alternative energy sources utilizing chemistry for sustainable environment for future generations

GR15A1024-Business Communication and Soft Skills-B.Tech I Year II Semester
Course Outcomes
1. Interpret and categorize the role and importance of various forms of communication skills. 2. Apply and relate verbal and non-verbal communication with reference to professional contexts. 3. Appraise professional responsibilities in an analytical manner 4. Plan and organize the activity of sequencing ideas in an efficacious style. 5. Evaluate and illustrate a neutral and correct form of English. 6. Distinguish and prioritize behavior in formal situations. 7. Combine business communication skills & soft skills to meet the requirement of corporate communication.

GR15A2011-Probability And Statistics-B.Tech II Year I Semester
Course Outcomes
1. Estimate the chance of occurrence of various uncertain events in different random experiments with strong basics of probability. 2. Evaluate random processes which occur in engineering applications governed by the Binomial, Poisson, Exponential, Normal and Uniform distributions. 3. Apply various sampling techniques. 4. Estimate the models using Regression Analysis. 5. Estimate the system performance measures in different queuing processes. 6. Apply Inferential Statistics to make predictions or judgments about the population from which the sample data is drawn. 7. Develop models for Stochastic Processes.

GR15A2062-Mathematical Foundation Of Computer Science-B.Tech II Year I Semester
Course Outcomes
1. Distinguish between statement logic and predicate logic. 2. Think logically and mathematically on topics like Basis of counting Combinations &amp, Permutations, with repetitions, constrained repetitions, Binomial Coefficients etc. 3. Design and Develop Trees, Graphs and their applications. 4. Develop different Properties of Binary Relations subsequent to the course. 5. Demonstrate in practical applications the use of basic counting principles ofpermutation and combinations. 6. Demonstrate knowledge on the foundations of many mathematical computer related concepts.

GR15A2063-Database Management Systems-B.Tech II Year I Semester
Course Outcomes
1. Recognize the different application of Databases 2. Generate relational model i.e.,tables based on the conceptual ER models. 3. Produce the database schema from relational model. 4. Execute database language for e.g. SQL to manipulate the data in the database. 5. Implement normalization techniques on the created database. 6. Compare the different transactions control mechanisms. 7. Organize file organizations and indexing mechanisms for real time applications.

GR15A2064-Advanced Data structures Through C++-B.Tech II Year I Semester
Course Outcomes
1. Distinguish between procedures and object oriented programming 2. Compare and contrast various data structures and design techniques in terms of their performance 3. Formulate data structure algorithms through C++ 4. Illustrate applications of Hash Tables, Trees and Graph Structures 5. Practicing the construction of various data structures using sample data 6. Select and employ various Rotations in balancing trees 7. Apply various Data structure strategies in solving real time problems

GR15A2065-Digital Logic Design-B.Tech II Year I Semester
Course Outcomes
1. Apply knowledge of fundamental Boolean principles and manipulation to design Logic Circuits 2. Apply various techniques of Boolean function simplification to create minimal expressions 3. Create combinational circuits for a specified behaviour with minimal specification 4. Apply state minimization and reduction to synthesize Sequential circuits 5. Realize combinational circuitry using Combinational PLDs 6. Synthesize and simulate combinational and sequential circuits using HDL 7. Test HDL models of combinational and sequential circuits

GR15A2066-Advanced Data Structures Through C++ Lab-B.Tech II Year I Semester
Course Outcomes
1. Develop programs illustrating various concepts of oops 2. Implement various data structures like priority queues, trees, graphs 3. Illustrate collision resolution strategies of hashing 4. Apply the knowledge of balanced tree concepts programmatically 5. Develop solutions for a range of problems using object oriented programming 6. Enhance analytical & logical skills in problem solving 7. Develop real-time projects using C++

GR15A2053-Digital Electronics Lab-B. Tech II Year I Semester
Course Outcomes
1. Study the theory of Boolean algebra and to study representation of switching functions through various experiments. 2. Perform the combinational logic design of various logic and switching devices and validate the outputs 3. Perform the sequential logic circuits design both in synchronous and Asynchronous modes for various complex logic and switching devices and validate the outputs 4. Design and validate the counters and registers for synchronous and asynchronous circuits 5. Design the combinational logic circuits using VHDL programming syntaxes. 6. Design the sequential circuits using VHDL programming syntaxes. 7. Describe the various VHDL programming concepts

GR15A2075-Database Management Systems Lab-B. Tech II Year I Semester
Course Outcomes
1. Adapt strong formal foundation in database concepts and technology 2. Adapt standard query language and its various versions 3. Design a database based on given requirements 4. Design and analyze projects with knowledge of relational model and relational database management system 5. Apply procedures, functions and packages on given database 6. Develop cursors, triggers on given database and implement error handling 7. Relate all these to one or more commercial product environments as they relate to the developer tasks

GR15A2001-Environmental Science-B.Tech II Year I Semester
Course Outcomes
1. Determine the importance of environment, its purpose, design and perspectives. 2. Demonstrate environmental issues related to the exploration of natural resources and development of mankind 3. Predict the role of professionals in protecting the environment from degradation. 4. Analyze solutions for environmental problems created by local national and global developmental activities. 5. Evaluate literature on environmental problems 6. Develop relevant research questions for environmental investigation. 7. Use methods and tools of environmental research, including statistical analysis, GIS and other techniques.

GR15A2104-Managerial Economics And Financial Analysis-B.Tech II Year II Semester
Course Outcomes
1. scan the economic environment; 2. understand the markets and competition; 3. forecast the demand; 4. plan the operations and the production; 5. choose an appropriate form of organisation; 6. know the cost and decide the price of the products and/or services produced, and 7. understand the financial statements and make financial analysis.

GR15A2076-Computer Organization-B.Tech II Year II Semester
Course Outcomes
1. Demonstrate knowledge of register organization of a basic computer system 2. Incorporate In-depth understanding of control unit organization and micro programmed control 3. Understand the performance of central processing unit of a basic computer system. 4. Apply various algorithms to perform arithmetic operations and propose suitable hardware for them 5. Analyze and emphasize various communication media in the basic computer system 6. Develop an ability to analyze and design various memory structures 7. Analyze the performance of a Multiprocessor System and various issues associated with its design.

GR15A2069-Operating Systems-B.Tech II Year II Semester
Course Outcomes
1. Recognize functions ,structures of operating systems 2. Exemplify various process management concepts including scheduling, synchronization, deadlocks 3. Organizing of memory including virtual memory. 4. Implementation of disk management considering issues related to file system interface 5. Recognize protection and security mechanisms and familiar with various types of operating systems including UNIX. 6. Check the sharing of system resources among the users. 7. Plan for a new operating systems.

GR15A2070-Object Oriented Programming Through Java-B.Tech II Year II Semester
Course Outcomes
1. Classify multicore architectures 2. Distinguish between higher threading and multi threading 3. Implement object oriented programming features and concepts for solving a given problem. 4. Produce complex programs using java standard API library

5. Implement object oriented programming concepts using java
6. Check the errors and trace the output of the program.
7. Develop interactive programs using applets and swings.

GR15A2077-Computer Networks-B.Tech II Year II Semester
Course Outcomes
1. Define basic terminology of computer networks 2. Apply various network configurations and transmission media to build a network for an organization 3. Gain knowledge and develop error correction technique for specified problems 4. Compare various routing methods and give solutions for transmission problems 5. Explain various transmission methods 6. Relate different protocols with various applications 7. Demonstrate solutions to various security problems related web applications

GR15A2072-Object Oriented Programming Through Java Lab-B.Tech II Year II Semester
Course Outcomes
1. Differentiate between procedure oriented programming and object oriented programming 2. Implement object oriented programming features and concepts for solving given problem 3. Produce complex programs using Java standard API Library 4. Evaluate the quality of program and improve it 5. Recognize required validations in the internet programming 6. Check for errors and do needed corrections of the program 7. Generate interactive programs using applets and swings.

GR15A2078-OPERATING SYSTEMS AND COMPUTER NETWORKS LAB-B.Tech II Year II Semester
Course Outcomes
1. Understand and analyze the various file organization techniques 2. Interpret and adapt the different operating systems and Networking systems 3. Implement of CPU scheduling algorithms 4. Compare and Contrast page replacement techniques 5. Understand the implementation aspect of data link layer 6. Implement various routing algorithms 7. Compare and contrast the various encryption mechanisms

GR15A2079-WEB DESIGNING LAB-B.Tech II Year II Semester
Course Outcomes
1. Build a static web sites using HTML 2. Design and implement web services 3. Apply the techniques and knowledge to provide the web interactivity 4. Apply the knowledge to provide security to the applications 5. Apply adobe Photoshop to create brouchers and edit the photos 6. Apply adobe flash to create the animations 7. Design the Web Pages using Dreamweaver tools

GR15A2002-Value Education And Ethics-B.Tech II Year II Semester
Course Outcomes
1. Choose the right value system by self analysis and right understanding 2. Use positive thinking, dignity of labour for building harmony and peace in self, family and society. 3. Analyze the importance of personality on effective behavior 4. Identify and solve ethical dilemmas by finding value based and sustainable solutions in professional life. 5. Find sustainable technological solutions for saving environment. 6. Demonstratevalue and ethical systems for continuous happiness and prosperity. 7. Illustrate effective teamwork bringing out win-win solutions for complex problems

GR15A2106-Gender Sensitization Lab-B.Tech II Year II Semester
Course Outcomes
1. Comprehend important issues related to gender in contemporary India. 2. Identify basic dimensions of the biological, sociological, psychological and legal aspects of the gender through the discussion of materials derived from research, facts, everyday life, literature and films. 3. Analyze how gender discrimination works in our society and how to counter is. 4. Illustrate the gender division of labour and its relation to politics and economics' 5. Demonstrate how men and women students, professionals will be better equipped to work and live together as equals. 6. Develop a sense of appreciation of women in all walks of life. 7. Interpret the laws that provide protection and relief to women form gender violence

GR15A3056-Design And Analysis Of Algorithms-B.Tech III Year I Semester
Course Outcomes
1. Express algorithms in a language independent manner (as pseudo codes) 2. Analyze the efficiency of the algorithms 3. Applying various searching and sorting algorithms for different applications 4. Illustrating various techniques like divide and conquer, greedy and dynamic approach in solving problems 5. Choosing the appropriate algorithm design techniques for real world problems 6. Comparing performances of various problem solving techniques and selecting the best suitable approach 7. Differentiate between deterministic and non-deterministic problem

GR15A3059-Web Technologies-B.Tech III Year I Semester

Course Outcomes
1. Recall HTML and CSS for designing web pages and JavaScript for designing dynamic web pages. 2. Apply the knowledge of hierarchy of objects from HTML in web pages. 3. Create and analyse the Java Bean components which form as basis for EJB. 4. Design dynamic and interactive websites. 5. Critique different technologies used for WEB designing 6. Develop XML documents and evaluate them using XML Schema and DTD. 7. Develop and Analyse server side web applications using JSP and JDBC.

GR15A2055-Microcontrollers-B.Tech III Year I Semester
Course Outcomes
1. Compare the functionally and architectures of microprocessors and microcontrollers 2. Analyze assembly language programming techniques 3. Explain the implementation of 8051 instruction set 4. Analyze assembly language programming concepts 5. Acquainted with design of microcontrollers 6. Interface various devices with microcontrollers 7. Design various programs to run several applications

GR15A3155 –Data Mining Applications-B.Tech III Year I Semester
Course Outcomes
1. Learn the concepts of database technology evolutionary path which has led to the need for data mining and its applications. 2. Design a data mart or data warehouse for any organization 3. Apply Preprocessing statistical methods for any given raw data 4. Extract knowledge using data mining techniques 5. Adapt to new data mining tools. 6. Explore recent trends in data mining such as web mining, spatial-temporal mining

GR15A3057-Software Engineering-B.Tech III Year I Semester
Course Outcomes
1. Plan to solve engineering problems. 2. Recognize the professional and ethical responsibility. 3. Implement the schedule of software development. 4. Attribute the impact of engineering solutions to global, economic, environmental, and societal context. 5. Compare different life cycle models. 6. Critique based on cyclomatic complexity of different software being developed. 7. Design and maintain software systems.

GR15A3069-Computer Graphics-B.Tech III Year I Semester

Course Outcomes
1. Student should be able to assess the principles and commonly used paradigms and techniques of computer graphics 2. Student should be able to comprehend mathematical processes to computer graphics problems and applications 3. Student should be able to writing applications that produce 2D computer graphics 4. Student should be able to writing applications that produce 3D computer graphics 5. Student should be able to realize various computer animation techniques 6. Student should be able to develop programs to display graphic images for given specifications 7. Ability to develop appropriate solutions and problems

GR15A3053 –Principals of Programming Language-B.Tech III Year I Semester
Course Outcomes
1. Recognize the criteria for evaluating programming languages and language constructs including programming paradigms 2. Exemplify formal methods of syntax. 3. Implement dividing a program into sub-programs in order to increase the readability and reusability. 4. Critique application of logic programming language and functional programming language. 5. Examine abstract data types, concurrency. 6. Compare functional and imperative languages. 7. Illustrate how to handle the exceptions.

GR15A3063-Web Technologies Lab-B.Tech III Year I Semester
Course Outcomes
1. Understand, analyze and apply the role of languages like HTML, DHTML, CSS, XML, JavaScript, Servlets, JSP and protocols in the workings of the web and web applications 2. Create web pages using HTML, DHTML and Cascading Styles sheets. 3. Create XML documents and XML Schema. 4. Create dynamic web pages using JavaScript (client side programming). 5. Create interactive web applications using JSP. 6. Build web applications using Servlets. 7. Modify, add and delete data in a database through a web page

GR15A3100-Advanced English Communication Skills Lab-B.Tech III Year I Semester
Course Outcomes
1. Apply conversation strategies to interact in paired and group discussion in business and academic settings. 2. Formulate courtesy, formality, and positive body language for effective communication. 3. Relate and utilize various sources that need to be mastered to crack GRE, TOEFEL and IELTS.

4. Equip with the skill to summarize, paraphrase and organize information after reading.
5. Develop the quality to draft a competent document in a focused manner.
6. Discern a problem to pool up various solutions by examining it in a multi facet manner.
7. Perceive multiple answering strategies relevantly.

GR15A2059-Microcontrollers Lab-B.Tech III Year II Semester
Course Outcomes
1. Comprehend the fundamentals in programming for microcontrollers 2. Analyze the code and build simple real time applications using microcontrollers 3. Know the skill to write, upload the programs on LED patterns, Switches and LEDs 4. Compile and compose the programs on LED patterns, Switches and LEDs 5. Describe the LCD and UART based programs 6. Interpret with various applications using TRIAC, ADC and DAC 7. Discriminate the Control based programs Interpret with RF 433 MHz, Bluetooth and ZigBee transmitter and Receiver

GR15A3103-Advanced Linux Programming-B.Tech III Year II Semester
Course Outcomes
1. Use a core set of UNIX commands with mechanism of shell and kernel programming techniques. 2. To understand the inner workings of UNIX-like operating systems 3. Gain knowledge in system call programming, multithreaded programming 4. Demonstrate the various signal handling concepts 5. Identify the role of kernel in file management and directory management 6. Able to use semaphores, shared memory, message queues for inter-process communications 7. Learn the various techniques involved in Inter Process Communication

GR15A3064-Automata And Compiler Design-B.Tech III Year II Semester
Course Outcomes
1. Graduates will get an understanding about abstract machines and their capability and limitations 2. A complete understanding about the compilation process and its complexity 3. Graduates will be able to understand the distinct features of the parsing techniques and their usage 4. A capability to understand the type system 5. An understanding about the different storage allocation techniques 6. Graduates will be able to understand and implement the various code optimization techniques 7. An understanding about the code generation aspect of the computer program

GR15A3065-Object Oriented Analysis And Design-B.Tech III Year II Semester
Course Outcomes
1. Exemplify the interface between classes and objects

2. Create class diagrams that model both the domain model and design model of a software system 3. Create interaction diagrams that model the dynamic aspects of a software system. 4. Critique all the nine UML diagrams drawn for a software design 5. Recognize business classes, attributes and relationships and construct the domain model as a class diagram using Rational Rose. 6. Check Component and Deployment diagrams for Real time Systems 7. Produce Forward and reverse engineering design for all UML Diagrams.

GR15A4097-Essentials of BigData Analytics-B.Tech IV Year II Semester
Course Outcomes
1. Analyze the Big Data Analytic techniques for useful Business Applications 2. List the capabilities of Hadoop and HDFS 3. Describe the use of Map Reduce 4. Manage Job Execution in Hadoop Environment 5. Explore Big Data Eco Systems Pig, Hive and HBase in IBM environment 6. Analyze IBM Infosphere BigInsights Big Data solutions 7. Explore Big Insights Big SQL, Big R, Big Sheets

GR15A3058-Information Security-B.Tech III Year IISemester
Course Outcomes
1. Implement the applications defined with confidentiality, integrity, and authentication. 2. Interpret various cryptographic algorithms. 3. Summarize intrusion and intrusion detection, Web security and firewalls. 4. Compare various message authentication algorithms. 5. Recognize the threats to information security 6. Differentiate the Key Management techniques 7. Critique the issues with structure of Authentication Service and Electronic Mail Security

GR15A3070-Embedded Systems-B.Tech III Year II Semester
Course Outcomes
1. Learn assembly language programming & embedded C. 2. Learn and design embedded systems and real-time systems 3. Define the unique design problems and challenges of real-time systems • Program an embedded system 4. Identify the unique characteristics of real-time operating systems and evaluate the need for real-time operating system. 5. Explain the general structure of a real-time system 6. Know and use RTOS to build an embedded real-time system. 7. Gain knowledge and skills necessary to design and develop embedded applications based on real-time operating systems.

GR15A3068-Distributed Databases And Systems-B.Tech III Year II Semester
Course Outcomes
1. Demonstration of the Distributed Database environment

2. Applicability to solve the fragment queries
3. Capability of understanding the architecture of the distributed database environment
4. Definition of the Transaction and the Concurrency issues
5. Analyzing the reliability of the Distributed Database
6. Outlining of the object databases
7. Capability to understand data integration issues

GR15A3072-Advanced Linux Programming Lab-B.Tech III Year II Semester
Course Outcomes
1. Use a core set of UNIX commands with mechanism of shell and kernel programming techniques. 2. To understand the inner workings of UNIX-like operating systems 3. Gain knowledge in system call programming, multithreaded programming 4. Demonstrate the various signal handling concepts 5. Identify the role of kernel in file management and directory management 6. Able to use semaphores, shared memory, message queues for inter-process communications 7. Learn the various techniques involved in Inter Process Communication

GR15A3071-Compiler Design And Unified Modeling Language Lab-B.Tech III Year II Semester
Course Outcomes
1. An ability to learn analysis and design of a business process and system as a whole by using UML 2. An ability to apply forward and reverse engineering of system using UML with a team effort 3. An ability to distinguish the different UML diagrams 4. An ability to learn how to apply the UML to a number of common modelling techniques 5. Students will get an understanding about the complete compilation process 6. Students will learn to write code for the lexical and syntax phases of compiler design 7. Students will understand about the three address coding intermediate code generation

GR15A3102-Management Science-B.Tech IV Year I Semester
Course Outcomes
1. The basic concepts, theories and approaches relating to management, organization, and leadership; 2. Principles of operations, statistical quality control and inventory control necessary for better managing production; 3. Fundamentals necessary for understanding marketing management; 4. Certain concepts and important functions of personnel management and industrial relations; 5. Tools and techniques of Project Management; 6. Strategic Management and Contemporary Strategic Issues; 7. Certain latest concepts like MIS, End User Computing, MRP, JIT, TQM, Six Sigma and CMM, SCM, ERP, PM, BPO, Business Process Re-engineering and Bench Marking, Balanced Score

Card.

GR15A3060-Scripting Languages-B.Tech IV Year I Semester
Course Outcomes
1. Students should be able to analyze a problem, identify and define the computing requirements appropriate to its solution 2. Students should be able to develop applications using PHP, Python 3. Students should be able to Understand connecting Web pages with DB 4. Students should be able to develop a form containing several fields and be able to process the data provided on the form by a user in a PHP-based script 5. Students should be able to understand basic PHP syntax for variable use, and standard language constructs, such as conditionals and loops 6. Students should be able to understand the syntax and use of PHP object-oriented classes 7. Students should be able to understand the syntax and functions available to deal with file processing for files on the server as well as processing web URLs

GR15A4104-Middleware Technologies-B.Tech IV Year I Semester
Course Outcomes
1. Choose appropriate client server computing model for given problem 2. Design a dynamic remote application with RMI and JDBC Connectivity 3. Develop client server applications using BDK 4. Develop client server applications using COM/.NET 5. Select appropriate language for homogeneous and heterogeneous objects 6. Develop java bean component model with EJBS and CORBA 7. Develop real time projects by combining CORBA and database interfacing

GR15A4087-Bussiness Intelligence-B.Tech IV Year I Semester
Course Outcomes
1. The students will be able to apply the knowledge of big data in business intelligent 2. The students will be able to handle different data modelling techniques by understanding the requirements and challenges involved it. 3. The students will be able to design a data warehouse and to fetch the information from a data warehouse 4. The students will be able to handle Cognos business intelligence and they can connect the frame work manager to Cognos business intelligence 5. The students will be able to generate Query studio, Report studio, Lists, Cross bar reports, Charts, prompts, drilling from one report to another etc.

GR15A4077-Software Testing Methodologies-B.Tech IV Year I Semester
Course Outcomes
1. Create a model for testing and criticize various consequences of bugs.

2. Interpret sensitization and instrumentation of paths
3. Apply a path testing technique for a given software.
4. Check various state testing techniques for exploring state related bugs.
5. Recognize domains for data items used in an application.
6. Design test cases based on decision tables.
7. Attribute graph matrices techniques for the simplification of testing process.

GR15A3061-Artificial Intelligence and Neural Networks-B.Tech IV Year I Semester
Course Outcomes
1. Use Heuristic approach for dealing with real world problems 2. Apply Proposition logic for fact representation 3. Use Optimization techniques for solving the problems 4. Implement Back propagation networks for machine learning 5. Analyze Feature learning techniques for classifying/recognizing the patterns 6. Apply Training and validation of Artificial neural networks for abstraction 7. Implement Adaptive resonance theory for scientific problems

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GR15A4094-Semantic Web and Social Networks-B.Tech IV Year I Semester
Course Outcomes
1. Explain the three generations of the web 2. Understand semantic web basics, architecture and technologies 3. Understand the semantic relationships using Resource Descriptive Framework (RDF) 4. Analyze and explain how technical changes affect the social aspects of Web based computing 5. Understand and analyze key web applications including search engines and social networking sites 6. Develop Linked data applications using Semantic Web Technologies

GR15A4084-Scripting Languages Lab-B.Tech IV Year I Semester
Course Outcomes
1. Recall process of executing a PHP-based script on a web server. 2. Compare different Data Base languages.

3. Generate complete web applications using PHP and My SQL.
4. Analyze requirements of software system for the purpose of implementing in PERL/PYTHON.
5. Implement simple graphical user interfaces that drive their programs.
6. Critique the paradigm for dealing with form-based data, both from the syntax of HTML forms, and how they are accessed inside a PHP-based script.
7. Organize websites to load data from them (web scraping).

GR15A4099-Middleware Technologies Lab-B.Tech IV Year I Semester
Course Outcomes
1. To understand the role of middleware in the distributed environment 2. To study the set of services that a middleware system constitutes of 3. To understand how middleware facilitates the development of distributed applications in heterogeneous environments 4. An Ability to understand the EJB Architectures and Applications 5. To study how it helps to incorporate application portability, distributed application component interoperability and integration 6. To learn the object oriented middleware basics through the example of the following CORBA objects 7. To understand the basics of Web services that is the most oft-used middleware technique

GR15A4100-Animations Lab-B.Tech IV Year I Semester
Course Outcomes
1. Identify the 12 principles of animation 2. Calculate and apply appropriate frame rates 3. Manipulate animation production equipment 4. Describe characteristics of well-designed and executed animation 5. Assess and critique past and current animation trends 6. Demonstrate progress in basic drawing and animation skills 7. Demonstrate skills in the use of industry standard tools for animation

GR15A4082-Mobile Application Development-B.Tech IV Year II Semester
Course Outcomes
1. Recall the key technological principles and methods for delivering and maintaining mobile applications, 2. Evaluate suitable software tools and APIs for the development of a particular mobile application 3. Implement High level and Low level Displays of mobile and Storing data by using Record 4. Management System(RMS) 5. Produce mobile applications using an appropriate software development environment with Database. 6. Critique requirements for mobile platforms to establish appropriate strategies for development and deployment

7. Interpret a scenario, plan, design and develop a prototype hybrid and native mobile application,
8. Differentiate leading edge developments in mobile application development.

GR15A4101-Software Project Management-B.Tech IV Year II Semester
Course Outcomes
1. To take responsibility of a project team and project organization 2. Apply problem solving skills, core IT concepts, best practices and standards to information Technologies 3. Work with high level and low level Displays of mobile and storing data by using record management system 4. Design, implement and deploy mobile applications using an appropriate software development Environment with database 5. Understands how different management and development practices affect software and process quality 6. Apply theoretical knowledge on project management and software development into practice 7. Be well aware on ethical issues related to software project management and can apply this ethical knowledge in practical situations

GR15A4079-Cloud Computing-B.Tech IV Year II Semester
Course Outcomes
1. Understand the features, advantages and challenges of Cloud Computing, compare their operation, implementation and performance. 2. Understand, Analyze and Compare different types of Clouds and Cloud Services. 3. Execute/Provide Cloud computing solutions for individual users as well as enterprises. 4. Evaluate, Collaborate and work in teams to contribute and give feedback on case studies on different cloud computing solutions. 5. Understanding and Validating the financial, and technological implications in selecting Cloud Computing Paradigm for an organization. 6. Understand and Analyze the Challenges and Risks involved in the Cloud. 7. Create/Deploying of an Application on a Cloud

GR15A4091-E-Commerce-B.Tech IV Year II Semester
Course Outcomes
1. Summarize nature and types of e-commerce. 2. Differentiate all types of business models. 3. Attribute the appropriate technologies to develop and deliver e-commerce applications. 4. Plan suitable software, hardware and e-com tools for developing a better web application. 5. Implement a robust, safe and secured online payment system. 6. Recognize online content and management. 7. Interpret about the current e-commerce development and usage of effective internet.

GR15A4090-Design Patterns-B.Tech IV Year II Semester

Course Outcomes
1. Apply Singleton Pattern to provide controlled access to the sole instance of a class. 2. Apply Composite Pattern to represent whole-part hierarchies of objects. 3. Explain Factory Method Pattern to eliminate the need to 'hard-code' specific class names. 4. Attribute Strategy Pattern to configure a class with one of many alternate behaviour 5. Produce creational patterns to help make systems independent of how its objects are created. 6. Plan structural patterns to compose classes and objects into larger structures. 7. Critique other behavioral pattern to manage algorithms and assign responsibilities to objects

GR15A4102-Adhoc Sensor Networks-B.Tech IV Year II Semester
Course Outcomes
1. Work with existing Ad-hoc and sensor network protocols and standards 2. Create a Sensor network environment for different type of applications 3. Design ad-hoc and sensor network architectures using QoS and Congestion control mechanisms 4. Interpret the various control fields of the protocol in each layer 5. Select appropriate routing algorithms for different network environments 6. Program ad-hoc and sensor network for various applications 7. Deploy security mechanisms in the wireless ad-hoc and sensor networks 8. Deploy Network Security Protocols

GR15A4098-Network Programming-B.Tech IV Year II Semester
Course Outcomes
1. Demonstrate understanding of the TCP/IP model and relevant protocols in each layer 2. Describe the IP addressing, Internet domain names and recognize the role of the DNS servers 3. Identify and apply various socket programming concepts and mechanisms 4. Use effectively the socket interface or remoting to develop Client-Server applications 5. Practice software engineering principles and methods in building network-aware applications 6. Design and implement Client-Server applications using TCP and UDP sockets 7. Design and create a communication channel between dissimilar machines

GR15A4105-Mobile Application Development Lab-B.Tech IV Year II Semester
Course Outcomes
1. Ability to design and implement and make a mobile application on android platform 2. Ability to do work on operating system and various key applications

3. To gain knowledge to work on various APIs
4. To learn to work on deploying android applications
5. They can do various mobile apps on animations and gaming
6. Able to work on SQLITE database
7. To install and run the .apk file in mobile