



SRKR ENGINEERING COLLEGE::BHIMAVARAM

Department of Information Technology

R20

COURSE OUTCOMES

Program Name: B.Tech (Information Technology)

SEMESTER: 1

COURSE YEAR: 2020-2021

Course Name: (ENGLISH)

COURSE	COURSE OUTCOMES	
ENGLISH B20 HS 1101	HS 1101.1	Identify the context, topic and pieces of specific information by understanding and responding to the social or transactional dialogues spoken by native speakers of English
	HS 1101.2	Apply suitable strategies for skimming and scanning to get the main idea of a text and locate specific information.
	HS 1101.3	Build confidence and adapt themselves to the social and public discourses, discussions and presentations.
	HS 1101.4	Apply the principles of writing to paragraphs, arguments, essays and formal/informal communication.
	HS 1101.5	Construct sentences using proper grammatical structures and correct word forms..

Course Name: (MATHEMATICS-I)

COURSE	COURSE OUTCOMES	
MATHEMATICS-I B20 BS 1101	BS 1101.1	Solve a given system of linear algebraic equations
	BS 1101.2	Determine Eigen values and Eigen vectors of a system represented by a matrix
	BS 1101.3	Solve ordinary differential equations of first order and first degree
	BS 1101.4	Apply the knowledge in simple applications such as Newton's law of cooling, orthogonal trajectories and simple electrical circuits
	BS 1101.5	Solve linear ordinary differential equations of second order and higher order..
	BS 1101.6	Determine Laplace transform, inverse Laplace transform and solve linear ODE

Course Name: (APPLIED CHEMISTRY)

COURSE	COURSE OUTCOMES	
APPLIED CHEMISTRY B20 BS 1103	BS 1103.1	Develop polymer composites, synthetic polymers and formulation of polymers and their use in design
	BS 1103.2	Apply the knowledge about quality of water and its treatment methods for domestic and industrial applications. Understanding the principle, mechanism of corrosion and utilization of various techniques to control.
	BS 1103.3	Develop the knowledge of fuels and their economics, advantages and limitations. Make use of the basic concepts of semiconductors and liquid crystals for engineering applications.
	BS 1103.4	Identify constituents of various ceramic materials, characteristics and their appropriate use in construction. Apply the knowledge of electrochemistry principles to design energy storage.

Course Name: (PROGRAMMING FOR PROBLEM SOLVING USING C)

COURSE	COURSE OUTCOMES	
PROGRAMMING FOR PROBLEM SOLVING USING C B20 CS 1101	CS 1101.1	Apply Precedence and Associativity rules to evaluate Expressions
	CS 1101.2	Make use of Decision Making and Looping statements to solve various problems in C
	CS 1101.3	Illustrate the importance of Arrays and Strings and to apply various operations on them
	CS 1101.4	Solve various problems by making use of Structure and Union concepts
	CS 1101.5	Design and implement programs to analyze the different pointer applications
	CS 1101.6	Develop programs using Functions and Pointers..

Course Name: (FUNDAMENTALS OF COMPUTERS AND INFORMATION TECHNOLOGY)

COURSE	COURSE OUTCOMES	
FUNDAMENTALS OF COMPUTERS AND INFORMATION TECHNOLOGY 20IT1101	IT1101.1	Understand basic concepts and terminology of information technology.
	IT1101.2	Have a basic understanding of personal computers, related devices and their operations.
	IT1101.3	Understand the difference between an operating system and an application program, and what each is used for in a computer.
	IT1101.4	Understand Basic terminology and concepts related to Computer networks, Security.
	IT1101.5	Understand basics of Database management systems and learn to create forms using MS access Wizard, and current and future trends of IT.

Course Name: (PROGRAMMING FOR PROBLEM SOLVING USING C LAB)

COURSE	COURSE OUTCOMES	
PROGRAMMING FOR PROBLEM SOLVING USING C LAB B20 CS 1103	CS 1103.1	Write, Trace and Debug the programs and correct syntax and logical errors.
	CS 1103.2	Solve various Problems by making use of Arrays, Strings, Structures, Unions and Pointers
	CS 1103.3	Solve a complex problem by decomposing into several modules by using Functions
	CS 1103.4	Apply various File I/O operations

Course Name: (APPLIED CHEMISTRY LAB)

COURSE	COURSE OUTCOMES	
Applied Chemistry LAB B20 BS 1108	BS 1108.1	Gain technical knowledge of measuring, operating and testing of chemical instruments and equipments. Carrying out different types of chemical reactions for analysing different materials in micro level quantities.
	BS 1108.2	Analyze and generate experimental skills to enhance the analytical thinking capabilities in the modern trends in engineering and technology.

Course Name: (COMPUTER ENGINEERING WORKSHOP)

COURSE	COURSE OUTCOMES	
COMPUTER ENGINEERING WORKSHOP B20 CS 1104	CS 1104.1	Identify, assemble and update the components of a computer
	CS 1104.2	Configure, evaluate and select hardware platforms for the implementation and execution of computer applications, services and systems
	CS 1104.3	Make use of tools for converting pdf to word and vice versa.
	CS 1104.4	Develop presentation, documents and small applications using productivity tools such as word processor, presentation tools, spreadsheets, HTML, LaTeX

SEMESTER: 2

COURSE YEAR: 2020-2021

Course Name: (MATHEMATICS-II)

COURSE	COURSE OUTCOMES	
MATHEMATICS-II B20 BS 1201	BS1201.1	Determine Fourier series and half range series of functions
	BS 1201.2	Determine Fourier transforms of non-periodic functions and also use them to evaluate integrals
	BS 1201.3	Compute partial derivatives, total derivative and Jacobians
	BS 1201.4	Find maxima/minima of functions of two variables and evaluate some real definite integrals
	BS 1201.5	Form partial differential equations and solve Lagrange linear equation. Solve linear higher order homogeneous and non-homogeneous PDEs
	BS 1201.6	Find theoretical solution of one-dimensional wave equation and one-dimensional heat equation

Course Name: (APPLIED PHYSICS)

COURSE	COURSE OUTCOMES	
APPLIED PHYSICS B20 BS 1202	BS 1202.1	Interpret the behavior of light radiation in interference and diffraction Phenomena and their applications.
	BS 1202.2	Explain the classification and properties of dielectric and magnetic materials suitable for engineering applications.
	BS 1202.3	Understand the basics of modern optical technologies like lasers and optical fibers and their utility in various fields
	BS 1202.4	Explain the important aspects of semiconductors and electrical conductivity in them
	BS 1202.5	Understand the basics of technology of Ultrasonic's in various fields and demonstrate the synthesis and applications of nonmaterial's.

Course Name: (DIGITAL LOGIC DESIGN)

COURSE	COURSE OUTCOMES	
DIGITAL LOGIC DESIGN B20 IT 201	IT1201.1	Demonstrate different number systems, binary addition and subtraction, 2's complement representation and operations with this representation.
	IT1201.2	Understand the different switching algebra theorems and apply them for logic functions
	IT1201.3	Define the Karnaugh map for a few variables and make use for an algorithmic reduction of logic functions.
	IT1201.4	Understand various logic gates starting from simple ordinary gates to complex programmable logic devices & arrays and design different combinational logic circuits.
	IT1201.5	Design various sequential circuits starting from flip-flop to registers and counters.

Course Name: (OBJECT ORIENTED PROGRAMMING THROUGH C++)

COURSE	COURSE OUTCOMES	
OBJECT ORIENTED PROGRAMMING THROUGH C++ B20 IT 1202	IT 1202.1	Differentiate between the procedural and object oriented paradigm..
	IT 1202.2	Design object oriented applications using dynamic memory management techniques and overloading concepts.
	IT 1202.3	Demonstrate inheritance, pointer, polymorphism and virtual functions
	IT 1202.4	Apply implement generic programming, Exception handling in real time applications.

Course Name: (PRINCIPLES OF ELECTRICAL AND ELECTRONICS ENGINEERING)

COURSE	COURSE OUTCOMES	
PRINCIPLES OF ELECTRICAL AND ELECTRONICS ENGINEERING B20 EE 1203	EE 1203.1	Apply concepts of Ohm's Law, Kirchhoff's laws for solving DC circuits.
	EE 1203.2	Apply Phasor representation concept to Analyze single-phase AC circuits Consisting of series RL - RC - RLC combinations.
	EE 1203.3	Apply the Faraday's laws and induced EMF concepts to describe the operating Principles and characteristics of DC Machines, Transformers and Induction motors.
	EE 1203.4	Understand and apply basic concepts of semiconductor devices such as PN Junction diode and Zener diode.
	EE 1203.5	Understand and Analyze the characteristics of BJT in CE, CB, CC configurations and Analyze the characteristics of JFET.

Course Name: (APPLIED PHYSICS LAB)

COURSE	COURSE OUTCOMES	
APPLIED PHYSICS LAB B20 BS 1207	BS1207.1	Get hands on experience in setting up experiments and using the instruments / equipment individually
	BS1207.2	Get introduced to using new / advanced technologies and understand their significance

Course Name: (COMMUNICATION SKILLS LAB)

COURSE	COURSE OUTCOMES	
COMMUNICATION SKILLS LAB B20 HS 1202	HS 1202.1	Apply their linguistic competence in all LSRW skills to professional and personal settings.
	HS 1202.2	Apply communication skills learnt through various language learning activities to their advancement in academics and competitive examinations
	HS 1202.3	Draft job application letters, E-Mail messages and other writing discourses.
	HS 1202.4	Adopt professional etiquette consistent with formal settings.
	HS 1202.5	Improve fluency and clarity in both spoken and written English.

Course Name: (OBJECT ORIENTED PROGRAMMING THROUGH C++ LAB)

COURSE	COURSE OUTCOMES	
OBJECT ORIENTED PROGRAMMING THROUGH C++ LAB B20 IT 1203	IT 1203.1	Apply the basic concepts in C++ like Class and objects.
	IT 1203.2	Analyze memory management techniques like constructor, destructor and overloading mechanisms
	IT 1203.3	Apply reusability of code and usage of exception handling and generic programming

Course Name: (PROFESSIONAL ETHICS AND HUMAN VALUES)

COURSE	COURSE OUTCOMES	
PROFESSIONAL ETHICS AND HUMAN VALUES B20 MC 1202	MC 1202.1	Identify and analyze an ethical issue in the subject matter under investigation or in a relevant field. Demonstrate knowledge of ethical values in non-classroom activities, such as service learning, internships and field work.
	MC 1202.2	Identify the multiple ethical interests at stake in a real-world situation or practice and Articulate what makes a particular course of action ethically defensible.
	MC 1202.3	Assess their own ethical values and the social context of problems.
	MC 1202.4	Identify ethical concerns in research and intellectual contexts, including academic integrity, use and citation of sources, the objective presentation of data, and the treatment of human subjects

	MC 1202.5	Integrate, synthesize, and apply knowledge of ethical dilemmas and resolutions in academic settings, including focused and interdisciplinary research
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Course Name: (NATIONAL SERVICE SCHEME (NSS))

OURSE	COURSE OUTCOMES	
NATIONAL SERVICE SCHEME(NSS) B20 MC 1203	MC1203.1	understand general orientation about community service, voluntarism role and responsibility of NSS volunteer.
	MC1203.2	Analyze about the community he live in.
	MC1203.3	Asses the life in adopted villages.
	MC1203.4	Identify the importance of national days and attain participation in it.

SEMESTER: 3

COURSE YEAR: 2021-2022

Course Name: (NUMERICAL METHODS & VECTOR CALCULUS COMMON)

COURSE	COURSE OUTCOMES	
NUMERICAL METHODS & VECTOR CALCULUS COMMON B20 BS 2101	BS 2101.1	Determine a real root of an algebraic or transcendental equation. Fit an interpolation formula and perform interpolation for equally spaced and unequally spaced data.
	BS 2101.2	Evaluate numerically certain definite integrals. Solve a first order ordinary differential equation by Euler and RK methods.
	BS 2101.3	Evaluate double integrals and determine the areas.
	BS 2101.4	Evaluate triple integrals and determine the volumes.
	BS 2101.5	Find the gradient of a scalar function, divergence and curl of a vector function.
	BS 2101.6	Solve simple problems using vector integral theorems.

Course Name: (DATA STRUCTURES)

COURSE	COURSE OUTCOMES	
DATA STRUCTURES B20 IT 2101	IT 2101.1	Illustrate different techniques for searching and sorting for given data.
	IT 2101.2	Identify different parameters to analyze the performance of algorithms and implement linear data structures. Identify different parameters to analyze the performance of algorithms and implement linear data structures.
	IT 2101.3	Design algorithms to perform operations with Non Design algorithms to perform operations with Non

Course Name: (DATABASE MANAGEMENT SYSTEMS)

COURSE	COURSE OUTCOMES	
DATABASE MANAGEMENT SYSTEMS B20 IT 2102	IT 2102.1	Understand fundamental concepts and architectures of database systems.
	IT 2102.2	Develop database for an organization using E-R and Relational data models.
	IT 2102.3	Apply knowledge of SQL to Create, Manipulate and Query databases
	IT 2102.4	Examine anomalies in database design and Apply Normalization concepts to refine the design.
	IT 2102.5	Understand issues in transaction processing and data organization and efficient ways to address the same.

Course Name: (PYTHON PROGRAMMING)

COURSE	COURSE OUTCOMES	
PYTHON PROGRAMMING B20 IT 2103	IT 2103.1	Develop essential programming skills in computer programming concepts like data types, containers
	IT 2103.2	Apply the basics of programming in the Python language
	IT 2103.3	Solve coding tasks related conditional execution, loops
	IT 2103.4	Solve coding tasks related to the fundamental notions and techniques used in objectoriented programming
	IT 2103.5	Implement the User defined exceptions and GUI application

Course Name: (DISCRETE MATHEMATICS AND GRAPH THEORY)

COURSE	COURSE OUTCOMES	
DISCRETE MATHEMATICS AND GRAPH THEORY B20 IT 2104	IT 2104.1	Write and verify the arguments for their validity using propositional and predicate logic.
	IT 2104.2	Utilize different counting method sin their fields of study..
	IT 2104.3	Make use of various types of relations and their properties.
	IT 2104.4	Identify different Lattices and Boolean expressions.
	IT 2104.5	Formulate and solve the recurrence relations.
	IT 2104.6	Utilize the concepts in graphs and trees.

Course Name: (DATA STRUCTURES LAB)

COURSE	COURSE OUTCOMES	
DATA STRUCTURES LAB B20 IT 2105	IT 2105.1	Use basic data structures such as arrays and linked list.
	IT 2105.2	Programs to demonstrate fundamental algorithmic problems including Tree Traversals, Graph traversals, and shortest paths.
	IT 2105.3	Use various searching and sorting algorithms.

Course Name: (DATABASE MANAGEMENT SYSTEMS LAB)

COURSE	COURSE OUTCOMES	
DATABASE MANAGEMENT SYSTEMS LAB B20 IT 2106	IT 2106.1	Utilize SQL to execute queries for creating database and performing data manipulation operations.
	IT 2106.2	Apply Queries using Advanced Concepts of SQL
	IT 2106.3	Build PL/SQL programs including stored procedures, functions and cursors.
	IT 2106.4	Create Triggers to initiate system responses for user actions.

Course Name: (PYTHON PROGRAMMING LAB)

COURSE	COURSE OUTCOMES	
PYTHON PROGRAMMI NG LAB B20 IT 2107	IT 2107.1	Write, Test and Debug Python Programs
	IT 2107.2	Use Conditionals and Loops for Python Programs
	IT 2107.3	To use of an operating system to develop software
	IT 2107.4	Use functions and represent Compound data using Lists, Tuples and Dictionaries
	IT 2107.5	Use various applications using python

Course Name: (SPREAD SHEET DATA ANALYSIS)

COURSE	COURSE OUTCOMES	
SPREAD SHEET DATA ANALYSIS B20 IT 2109	IT 2109.1	Describe common Excel functionality and features used for data science.
	IT 2109.2	Analyze and construct the data Visualization
	IT 2109.3	Configure the programming environment
	IT 2109.4	Analyze real time data set.
	IT 2109.5	Implement Pivot tables and VLOOKUP functions

Course Name: (ENGLISH PROFICIENCY)

COURSE	COURSE OUTCOMES	
ENGLISH PROFICIENCY B20 MC 2103	MC 2103.1	Improve speaking skills.
	MC 2103.2	Enhance their listening capabilities
	MC 2103.3	Learn and practice the skills of composition writing
	MC 2103.4	Enhance their reading and understanding of different texts.
	MC 2103.5	Improve their communication both in formal and informal contexts.
	MC 2103.6	Be confident in presentation skills.

SEMESTER: 4

COURSE YEAR: 2021-2022

Course Name: (MANAGERIAL ECONOMICS AND FINANCIAL ACCOUNTANCY)

COURSE	COURSE OUTCOMES	
MANAGERIAL ECONOMICS AND FINANCIAL ACCOUNTANCY B20 HS 2201	HS 2201.1	Equip oneself with the knowledge of estimating the Demand and demand elasticities for a product.
	HS 2201.2	Have knowledge of Cost and its types and ability to calculate BEP
	HS 2201.3	Understand the nature of different markets
	HS 2201.4	Understand Pricing Practices prevailing in today's business world.
	HS 2201.5	Prepare Financial Statements and know how to calculate Profit & Loss for a firm
	HS 2201.6	Know Types of capital and their sources and know how to calculate Depreciation

Course Name: (STATISTICS with R)

COURSE	COURSE OUTCOMES	
STATISTICS with R B20 BS 2202	BS 2202.1	Identify discrete and continuous random variables and data structures in R
	BS 2202.2	Apply discrete and continuous probability distributions to the given data and Execute R functions for probability distributions.
	BS 2202.3	Explain sampling distribution, estimation, and R functions for constructing confidence intervals
	BS 2202.4	Test the given hypothesis of population based on a sample data
	BS 2202.5	Describe built in R functions for sampling tests.
	BS 2202.6	Apply the concepts of correlation and regression to the given statistical data. Make use of graphic functions to visualize the data.

Course Name: (COMPUTER ORGANIZATION)

COURSE	COURSE OUTCOMES	
COMPUTER ORGANIZATION B20 IT 2201	IT 2201.1	Illustrate the various data representations, notations, arithmetic algorithms and flow control for various instructions using micro operations in basic computer
	IT 2201.2	Detailed understanding of architecture and functionality of central processing unit and various control units
	IT 2201.3	Exemplify in a better way the I/O and memory organization
	IT 2201.4	Illustrate concepts of parallel processing, pipelining and inter processor communication

Course Name: (JAVA PROGRAMMING)

COURSE	COURSE OUTCOMES	
JAVA PROGRAMMING B20 IT 2202	IT 2202.1	Able to apply the concepts of Object-Oriented Programming & Java Programming Constructs
	IT 2202.2	Able to understand the basic concepts of Java such as operators, classes, objects, and various keywords
	IT 2202.3	Apply the concept of Inheritance, Interfaces and Overriding the methods
	IT 2202.4	Able to Analyze the applications of Java using Multithreading, Exception handling
	IT 2202.5	Able to Analyze & Design the concept of Event Handling and Abstract Window Toolkit

Course Name: (PRINCIPLES OF SOFTWARE ENGINEERING)

COURSE	COURSE OUTCOMES	
PRINCIPLES OF SOFTWARE ENGINEERING B20 IT 2203	IT 2203.1	Apply software engineering concepts to illustrate various phases of a lifecycle and choose appropriate process model depending on the user requirements.
	IT 2203.2	Perform requirements analysis and design UML diagrams for the requirements gathered.
	IT 2203.3	Implement various processes used in all the phases of the product.
	IT 2203.4	Test whether all the requirements specified have been achieved or not

Course Name: (UNIFIED MODELING LANGUAGE (UML) LAB)

COURSE	COURSE OUTCOMES	
UNIFIED MODELING LANGUAGE (UML) LAB B20 IT 2204	IT 2204.1	Practice the syntax of different UML diagrams.
	IT 2204.2	Design UML diagrams that model both domain model and design model of a software system
	IT 2204.3	Implement the source code and develop significant projects.
Test and document the software.		

Course Name: (R PROGRAMMING LAB)

COURSE	COURSE OUTCOMES	
FREE OPEN- SOURCE SOFTWARE LAB B20 IT 2205	IT 2205.1	Demonstrate UNIX commands for file handling and process control
	IT 2205.2	Construct regular expressions for pattern matching and apply them to various filters for a specific task
	IT 2205.3	Analyze a given problem and apply requisite facets of shell programming in order to devise a shell script to solve the problem

Course Name: (JAVA PROGRAMMING LAB)

COURSE	COURSE OUTCOMES	
JAVA PROGRAMMING LAB B20 CS 2206	CS 2206.1	Apply primitive data types, Operations, Expressions, Control
	CS 2206.2	Examine Class, Objects, Methods, Inheritance, Exception, Runtime Polymorphism, User defined Exception handling mechanism
	CS 2206.3	Analyzing simple inheritance, multi-level inheritance, Exception handling mechanism
	CS 2206.4	Analyze and Construct Threads, Event Handling, implement packages

Course Name: (WEB PAGE DESIGN USING PHP)

COURSE	COURSE OUTCOMES	
WEB PAGE DESIGN USING PHP B20 IT 2208	IT 2208.1	Apply the principles of creating an effective web page.
	IT 2208.2	Apply the elements of design with regard to the web.
	IT 2208.3	Create the language of the web: HTML and CSS.
	IT 2208.4	Develop skills in analyzing the usability of a web site.
	IT 2208.5	Understand how to plan and conduct user research related to web usability
	IT 2208.6	Create CSS grid layout

Course Name: (AUTOMATA THEORY AND COMPILER DESIGN)

COURSE	COURSE OUTCOMES	
AUTOMATA THEORY AND COMPILER DESIGN B20 IT 3101	IT 3101.1	Design DFA, NFA for the given regular expressions
	IT 3101.2	Design parse trees and parsers for the given grammar
	IT 3101.3	Design algorithms to perform code optimization to improve the performance of a program in terms of space and time complexity
	IT 3101.4	Design algorithms to generate machine code

Course Name: (DATA MINING TECHNIQUES)

COURSE	COURSE OUTCOMES	
DATA MINING TECHNIQUES B20 IT 3102	IT 3102.1	Illustrate the importance of Data Warehousing, Data Mining and its functionalities and Design schema for real time data warehousing applications.
	IT 3102.2	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
	IT 3102.3	Choose appropriate classification technique to perform classification, model building and evaluation.
	IT 3102.4	Make use of association rule mining techniques viz. Apriori and FP Growth algorithms and analyze on frequent item sets generation.
	IT 3102.5	Identify and apply various clustering algorithm (with open source tools), interpret, evaluate and report the result

Course Name: (OPERATING SYSTEMS)

COURSE	COURSE OUTCOMES	
OPERATING SYSTEMS B20 IT 3103	IT 3102.1	Describe various generations of Operating System and functions of Operating System
	IT 3103.2	Describe the concept of program, process and thread and analyze various CPU Scheduling Algorithms and compare their performance
	IT 3103.3	Solve Inter Process Communication problems using Mathematical Equations by various methods
	IT 3103.4	Compare various Memory Management Schemes especially paging and Segmentation in Operating System and apply various Page Replacement Techniques

	IT 3103.5	Outline File Systems in Operating System like UNIX/Linux and Windows
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Course Name: (ARTIFICIAL INTELLIGENCE)

COURSE	COURSE OUTCOMES	
ARTIFICIAL INTELLIGENCE B20 IT 3104	IT 3104.1	Understand the basic applications of AI and problems that can be solved by AI
	IT 3104.2	Apply the problem-solving strategies to generate best AI solutions using state space search
	IT 3104.3	Apply AI languages to represent knowledge base
	IT 3104.4	Apply AI tools to represent knowledge base
	IT 3104.5	Apply uncertainty techniques to solve AI real time problems

Course Name: (AGILE SOFTWARE PROCESS)

COURSE	COURSE OUTCOMES	
AGILE SOFTWARE PROCESS B20 IT 3105	IT 3105.1	Comprehend the common characteristics of an agile development process.
	IT 3105.2	Identify and contrast state of the practice agile methodologies.
	IT 3105.3	Analyze and contrast agile software development process models and plan driven process models.
	IT 3105.4	Determine software project characteristics that would be suitable for an agile process

Course Name: (DATA MINING TECHNIQUES WITH R LAB)

COURSE	COURSE OUTCOMES	
DATA MINING TECHNIQUES WITH R LAB B20 IT 3109	IT 3109.1	Extend the functionality of R by using add-on packages
	IT 3109.2	Extract data from files and other sources and perform various data manipulation tasks on them.
	IT 3109.3	Code statistical functions in R
	IT 3109.4	Use R Graphics and Tables to visualize results of various statistical operations on data.

	IT 3109.5	Apply the knowledge of R gained to data Analytics for real life applications.
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Course Name: (OPERATING SYSTEMS LAB)

COURSE	COURSE OUTCOMES	
OPERATING SYSTEMS LAB B20 IT 3110	IT 3110.1	Use Unix utilities and perform basic shell control of the utilities
	IT 3110.2	Design different system calls for writing application programs.
	IT 3110.3	Implement various scheduling, page replacement algorithms and algorithms related to deadlocks.
	IT 3110.4	Design programs for shared memory management and semaphores.

Course Name: (SOFT SKILLS)

COURSE	COURSE OUTCOMES	
SOFT SKILLS B20 HS 3102	HS 3102.1	Apply soft skills in the work place and build better personal and professional relationships making informed decisions.
	HS 3102.2	Participate in group discussions/group activities, exhibit team spirit, use language effectively according to the situation, respond to their interviewer/employer with a positive mind, make answers to the questions asked during their technical/personal interviews, exhibit skills required for the different kinds of interviews (stress, technical, HR) that they would face during the course of their recruitment process.

Course Name: (COMPETITIVE CODING)

COURSE	COURSE OUTCOMES	
COMPETITIVE CODING B20 IT 3102	IT 3102.1	Solve Recursion and Backtracking Problems
	IT 3102.2	Solve various algorithms related to Number Theory
	IT 3102.3	Implement various algorithms related to Linear Data Structures
	IT 3102.4	Implement various algorithms related to Non - Linear Data Structures
	IT 3102.5	Implement Divide and Conquer and Greedy Algorithms
	IT 3102.6	Understand the concept of Dynamic Programming by solving problems

Course Name: (MACHINE LEARNING)

COURSE	COURSE OUTCOMES	
MACHINE LEARNING B20 IT 3201	IT 3201.1	Explain and apply the fundamental usage of the concept Machine Learning system
	IT 3201.2	Demonstrate various classifications and Regression Techniques
	IT 3201.3	Analyze the Ensemble Learning Methods
	IT 3201.4	Design programs for shared memory management and semaphores.
	IT 3201.5	Illustrate the Clustering Techniques and Dimensionality Reduction Models in Machine Learning.

Course Name: (DESIGN AND ANALYSIS OF ALGORITHMS)

COURSE	COURSE OUTCOMES	
DESIGN AND ANALYSIS OF ALGORITHMS B20 IT 3202	IT 3202.1	Analyze the performance of a given algorithm, denote its time complexity using the asymptotic notation for recursive and non-recursive algorithms
	IT 3202.2	List and describe various algorithmic approaches and Solve problems using divide and conquer & greedy Method.
	IT 3202.3	Synthesize efficient algorithms dynamic programming approaches to solve in common engineering design situations.
	IT 3202.4	Apply the Backtracking and Branch-and-bound strategies for solving complex problems
	IT 3202.5	Understand the basic concepts of NP-Hard and NP- Complete and Solve string matching using various algorithms.

Course Name: (COMPUTER NETWORKS)

COURSE	COURSE OUTCOMES	
COMPUTER NETWORKS B20 IT 3203	IT 3203.1	Explain the functions of the different layer of the OSI Protocol.
	IT 3203.2	Draw the functional block diagram of wide-area networks (WANs), local area networks (LANs) and Wireless LANs (WLANs) describe the function of each block.
	IT 3203.3	Apply different access control techniques to understand operation of internet

	IT 3203.4	Analyze to resolve IP addresses class full , perform routing
	IT 3203.5	Understand DNS, EMAIL, HTTP,

Course Name: (MOBILE COMPUTING)

COURSE	COURSE OUTCOMES	
MOBILE COMPUTING B20 IT 3204	IT 3204.1	Analyze the performance of a given algorithm, denote its time complexity using the asymptotic notation for recursive and non-recursive algorithms
	IT 3204.2	List and describe various algorithmic approaches and Solve problems using divide and conquer & greedy Method.
	IT 3204.3	Synthesize efficient algorithms dynamic programming approaches to solve in common engineering design situations.
	IT 3204.4	Apply the Backtracking and Branch-and-bound strategies for solving complex problems
	IT 3204.5	Understand the basic concepts of NP-Hard and NP- Complete and Solve string matching using various algorithms.

Course Name: (MEAN STACK DEVELOPMENT)

COURSE	COURSE OUTCOMES	
MEAN STACK DEVELOPMENT B20 IT 3205	IT 3205.1	Build static web pages using HTML 5 elements
	IT 3205.2	Apply JavaScript to embed programming interface for web pages and also to perform Client side validations.
	IT 3205.3	Build a basic web server using Node.js, work with Node Package Manager (NPM) and recognize the need for Express.js.
	IT 3205.4	Develop JavaScript applications using typescript and work with document database using Mongo DB
	IT 3205.5	Utilize Angular JS to design dynamic and responsive web pages.

Course Name: (DESIGN PATTERNS)

COURSE	COURSE OUTCOMES	
DESIGN PATTERNS	IT 3206.1	Construct a design consisting of a collection of modules
	IT 3206.2	Examine well-known design patterns (such as Iterator, Observer, Factory and Visitor)

B20 IT 3206	IT 3206.3	Distinguish between different categories of design patterns
	IT 3206.4	Ability to understand and apply common design patterns to incremental /iterative development
	IT 3206.5	Identify appropriate patterns for design of given problem
	IT 3206.6	Design the software using Pattern Oriented Architectures

Course Name: (SCRIPTING LANGUAGES)

COURSE	COURSE OUTCOMES	
SCRIPTING LANGUAGES B20 IT 3207	IT 3207.1	Ability to understand the PERL scripting languages
	IT 3207.2	Understand the fundamentals of PHP to develop secured web application
	IT 3207.3	Explain syntax and variables in TCL
	IT 3207.4	Master an understanding of python especially the object-oriented concepts

Course Name: (BIG DATA ANALYTICS)

COURSE	COURSE OUTCOMES	
BIG DATA ANALYTICS B20 IT 3208	IT 3208.1	Identify the characteristics of datasets and compare the trivial data and big data for various applications. Illustrate big data challenges in different domains.
	IT 3208.2	Explore various techniques for mining data streams in real time analytics
	IT 3208.3	Explore the features of Distributed File System in Hadoop framework.
	IT 3208.4	Illustrate the features of Map-Reduce programming model to analyze the big data in Hadoop environment.
	IT 3208.5	Explore the tools in Hadoop Eco system and Data Visualization techniques.

Course Name: (MACHINE LEARNING USING PYTHON LAB)

COURSE	COURSE OUTCOMES	
MACHINE LEARNING USING PYTHON LAB B20 IT 3209	IT 3209.1	Implement procedures for the machine learning algorithms
	IT 3209.2	Design and Develop Python programs for various Learning algorithms
	IT 3209.3	Apply appropriate data sets to the Machine Learning algorithms
	IT 3209.4	Develop Machine Learning algorithms to solve real world problems.

Course Name: (COMPUTER NETWORKS LAB)

COURSE	COURSE OUTCOMES	
MACHINE LEARNING USING PYTHON LAB B20 IT 3210	IT 3210.1	Know how reliable data communication is achieved through data link layer.
	IT 3210.2	Suggest appropriate routing algorithm for the network.
	IT 3210.3	Analyze data link layer services, functions and protocols like HDLC.
	IT 3210.4	Provide internet connection to the system and its installation.
	IT 3210.5	Work on various network management tools

Course Name: (BIG DATA ANALYTICS LAB)

COURSE	COURSE OUTCOMES	
BIG DATA ANALYTICS LAB B20 IT 3211	IT 3211.1	Install Hadoop Distributed File system in sudo distributed and Fully distributed mode
	IT 3211.2	Implement Map Reduce Programs for different applications
	IT 3211.3	Setup different tools like Pig and Hive on top of HDFS
	IT 3211.4	Write different scripts and Queries on Pig and Hive tools

Course Name: (DATA SCIENCE: NATURAL LANGUAGE PROCESSING)

COURSE	COURSE OUTCOMES	
DATA SCIENCE: NATURAL LANGUAGE PROCESSING B20 IT 3212	IT 3212.1	Explore natural language processing (NLP) libraries in Python.
	IT 3212.2	Learn various techniques for implementing NLP including parsing & text processing.
	IT 3212.3	Understand how to use NLP for text feature engineering

Course Name: (VIDEO ANALYTICS)

COURSE	COURSE OUTCOMES	
VIDEO ANALYTICS B20 IT 3213	IT 3213.1	Illustrate the principles and techniques of digital image
	IT 3213.2	Demonstrate the image recognition and motion recognition
	IT 3213.3	Discuss the fundamentals of digital video processing
	IT 3213.4	Illustrate the motion estimation, segmentation and modeling
	IT 3213.4	Analyze video processing in applications

Course Name: (DISTRIBUTED TECHNOLOGIES-MONGODB)

COURSE	COURSE OUTCOMES	
DISTRIBUTED TECHNOLOGIES -MONGODB B20 IT 3214	IT 3214.1	Install, configure and setup the drivers to use MongoDB with your programming language of choice
	IT 3214.2	Gain an in-depth understanding of main features of MongoDB and their use cases
	IT 3214.3	Retrieve data in the database using advanced querying
	IT 3214.4	choice to build new types of applications for mobile, cloud, e-commerce and and social technologies Perform Experiments related to the following concepts

Course Name: (EMPLOYABILITY SKILLS)

COURSE	COURSE OUTCOMES	
Verbal Ability B20 MC 3201	MC 3201.1	Detect grammatical errors in the text/sentences and rectify them while answering their competitive/company specific tests and frame grammatically Correct sentences while writing.
	MC 3201.2	Answer questions on synonyms, antonyms and other vocabulary-based Exercises while attempting CAT, GRE, GATE and other related tests.
	MC 3201.3	Use their logical thinking ability and solve questions related to analogy, Syllogisms, and other reasoning-based exercises.
	MC 3201.4	Choose the appropriate word/s/phrases suitable to the given context in order to make the sentence/paragraph coherent.
Quantitative Aptitude-I B20 MC 3201	MC 3201.1	The students will be able to perform well in calculating on number problems and various units of ratio concepts
	MC 3201.2	The students will be able to solve problems on time and distance and units related solutions
	MC 3201.3	The students will become adept in solving problems related to profit and loss, in specific, quantitative ability
	MC 3201.4	The students will present themselves well in the recruitment process K3 Page 59 of 62 using analytical and logical skills which he or she developed during the course as they are very important for any person to be placed in the industry
	MC 3201.5	The students will learn to apply Logical thinking to the problems of Syllogisms and be able to effectively attempt competitive examinations like CAT, GRE, GATE for further studies

Course Name: (GENDER SENSITIZATION)

COURSE	COURSE OUTCOMES	
GENDER SENSITIZATION B20 HS 3204	HS 3204.1	Understand the important issues relating to gender in contemporary India
	HS 3204.2	Get sensitized to basic dimensions o
	HS 3204.3	Attain a finer grasp of how gender discrimination works in our society and how to counter it
	HS 3204.4	Acquire insight into the gendered division of labour and its relation to politics and economics.
	HS 3204.4	Develop a sense of appreciation for both men and women in all walks of life