

BRANCH:	Applied Science/B.Tech I			2023-24
COURSE:	B.TECH	YEAR:	I	I
SUBJECT:	B.TECH	YEAR:	I	AHT-001

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
AHT001.1	Investigate the physical optical phenomena using different optical systems, upto order of 3.	
AHT001.2	Apply the concept of physical optics to use the working of Lasers and optical fiber-based communication systems using He-Ne laser.	
AHT001.3	Analyze the properties of an electromagnetic wave and the characteristics of magnetic materials using Maxwell's equations.	
AHT001.4	Examine the dual nature of light and particle using the Schrodinger wave equation in one dimension.	
AHT001.5	Design the fabrication of semiconductor devices using the knowledge of semiconductor materials.	

BRANCH:	Applied Science/B.Tech I			2023-24
COURSE:	B.TECH	YEAR:	I	I
SUBJECT:	Introduction to Engineering Mathematics			AHT-001

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
AHT003.1	Apply the concept of matrices, eigenvalues, eigenvectors, and applications such as system solutions and diagonalization.	
AHT003.2	Analyze mean value theorems, and concept of extrema and error approximation to solve real life problems, extends to multivariable calculus.	
AHT003.3	Utilize the application of definite integrals to solve multiple integral upto three variables and visualize & analyze functions using curve tracing.	
AHT003.4	Implement theorems related to vector calculus like Gauss divergence, Stokes and Green to solve surface and volume integrals subjected to simple curves.	
AHT003.5	Evaluate the surface areas and volumes of revolutions, and geometric analysis of mass and stability in physical systems.	

BRANCH:	EEE /B.Tech I			2023-24
COURSE:	B.TECH	YEAR:	I	I
SUBJECT:	Basic Electrical Engineering			EET-001

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
EET001.1	Apply the knowledge of basic laws and concepts pertaining to different types of DC & AC supply systems	
EET001.2	APPLY the Electrical installation systems concepts in real world implementation	
EET001.3	CATEGORIZE the working of different types of electromechanical energy conversion systems under different working conditions	
EET001.4	ANALYZE the solutions of problems related to the different network structures as an individual or in a team	
EET001.5	Evaluate the problems of various Electromechanical energy conversion systems with the variation of the construction and loading parameters	

BRANCH:	CSE/B.Tech I			2023-24
COURSE:	B.TECH	YEAR:		
SUBJECT:	Programming for Problem Solving			

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
CST001.1	Apply algorithms and flow charts to design and develop the effective solutions for given problem.	
CST001.2	Apply the appropriate syntax and semantics of C Programming language for solution of engineering problems.	
CST001.3	Examine the problem of mathematics and logics using c programming to conduct investigation to solve complex problems .	
CST001.4	Select user define functions, arrays, pointers, strings and structures for reasoning informed by contextual knowledge for engineering practice.	
CST001.5	Evaluate effective programs to solve real world problem for societal benefit using user define data types and file handling as team for lifelong learning.	

BRANCH:	Applied Science/B.Tech I	2023-24
COURSE:	B.TECH	I
SUBJECT:	Engineering Physics Lab	AHP-001

COURSE OUTCOMES (CO)

CO #	CO STATEMENT
AHP001.1	Evaluate the wavelength of different colours of light using different optical instruments.
AHP001.2	Inspect the quantum mechanical phenomenon using optoelectronic devices.
AHP001.3	Estimate the properties of electricity and magnetism.
AHP001.4	Analyze the characteristics of semiconductor using electronic devices.
AHP001.5	Synthesize the theoretical and practical aspects of optoelectronics and semiconductors to develop comprehensive reports.

BRANCH:	EEE/B.Tech I	2023-24
COURSE:	B.TECH	I
SUBJECT:	Basic Electrical Engineering Lab	EEP-001

COURSE OUTCOMES (CO)

CO #	CO STATEMENT
EEP001.1	APPLY the standard procedure for the usage and measurement of different types of Electrical circuit components, measuring instruments and supply systems.
EEP001.2	CONDUCT of experiment as an individual or a team to perform different network structures and electromechanical energy conversion systems
EEP001.3	BUILD an elementary project using basic laws of electromagnetism.
EEP001.4	ANALYZE the responses as an individual or a team in the network structures and electromechanical energy conversion systems
EEP001.5	PREPARE a detailed professional engineering report on network theorems, electrical machines and installation systems that suitable in the given real life application.

BRANCH:	CSE/B.Tech I	2023-24
COURSE:	B.TECH	I
SUBJECT:	Programming for Problem Solving Lab	CSP-001

COURSE OUTCOMES (CO)

CO #	CO STATEMENT
CSP001.1	Apply the basic concepts of writing a program using C Language.
CSP001.2	Execute experiments as an individual or as team members using 'C' programming construct
CSP001.3	Examine the experiment output that display on file or computer screen.
CSP001.4	Apply the Functional/modularity, user define data type and pointers that dealing with memory management to create efficient c program.
CSP001.5	Write effective reports in prescribed format.

BRANCH:	ME/B.Tech I	2023-24
COURSE:	B.TECH	I
SUBJECT:	Engineering Graphics & Design Lab	MEP-002

COURSE OUTCOMES (CO)

CO #	CO STATEMENT
MEP002.1	Simplify complex objects for drawing by using orthographic projection Technique.
MEP002.2	Apply prior knowledge of math, science & projection techniques to construct drawing of 2-D surfaces and 3-D solids.
MEP002.3	Adapt to Auto CAD commands to Construct 2-D surfaces & 3-D solids.
MEP002.4	Analyze the given 2-D & 3-D objects based on it's actual shape, size and intricacies as an individual and in a team.
MEP002.5	Make an effective documentation for all the drawing problems and submit its report.
MEP002.6	

BRANCH:	MBA/B.Tech I	2023-24
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COURSE:	B.TECH	YEAR:	I	I
SUBJECT:	Introduction to Digital Marketing			AHP-003

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
AHP001.1	Apply the knowledge of different practicals related to Digital Marketing in real Business World.	
AHP001.2	Analyze the performance and validity of ideas with effective communication skills using various social media platform with proper professional ethics.	
AHP001.3	Convert the knowledge of marketing tools for conduct investigation of data.	
AHP001.4	Design the basic models of different tools for the Digital Marketing in business world.	
AHP001.5	Conduct an investigation in group and make lab manual to validate the ideas generated for bettering the digital communication.	

BRANCH:	MBA/B.Tech I	2023-24
COURSE:	B.TECH	YEAR: I
SUBJECT:	Self Employment and Entrepreneurship Development	AHP-005

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
AHP005.1	Understand the management of self employment & entrepreneurship involving various activities related to professional skills .	
AHP005.2	Illustrate by the help of complex assignments to describe the emerging change in future competencies using analysis techniques.	
AHP005.3	Organizing a market prospective using tools to evaluate possible self-employment areas that indicate the ability for collaboration.	
AHP005.4	Assessing effective and efficient financial & investment decision eventually leading to time and budget management	
AHP005.5	Reflecting about the cases of successful and unsuccessful entrepreneurs leading towards sustainability development in an effective and efficient leadership skills.	

BRANCH:	Applied Science/B.Tech I	2023-24
COURSE:	B.TECH	YEAR: I
SUBJECT:	Engineering Chemistry	AHT-002

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
AHT002.1	Extend chemical science with technical aspect of Engineering Chemistry.	
AHT002.2	Apply the facts and ideas of thermodynamics in the fields of engineering.	
AHT002.3	Utilize the technical knowledge in several industries, where Engineering chemistry is used as an integral part, like: Polymer chemistry; Paints, Lubricants; Fuel, Glass etc.	
AHT002.4	Solve the problem of hard and polluted water with its treatment and different type of corrossions with its minimization.	
AHT002.5	Analyzing of different advance techniques of Instrumental Chemistry, like: Principal of spectroscopy, NMR and MRI spectroscopy. Elementary idea about organic reactions and synthesis of Drugs.	

BRANCH:	Applied Science/B.Tech I	2023-24
COURSE:	B.TECH	YEAR: I
SUBJECT:	Analytical Mathematics	

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
AHT005.1	Solve wide range of differential equations, including variable separable, homogeneous, exact forms, linear & non-linear equations.	
AHT005.2	Apply mathematical techniques to analyze a higher order of ODEs, facilitating practical problems in engineering.	
AHT005.3	Utilize mathematical techniques like Lagrange's multiplier and Charpit method to solve partial differential equations, and solve problems related to heat and wave equations upto two dimensions.	
AHT005.4	Analyze complex variables, analytic functions, and calculate complex integrals using Cauchy's integral and residue theorems.	
AHT005.5	Test the convergence of sequences and series using convergence tests like comparison, D' Alembert's ratio test, Raabe's test.	

BRANCH:	ECE/B.Tech I	2023-24
COURSE:	B.TECH	YEAR: I
SUBJECT:	Basic Electronics Engineering	ECT001

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
ECT001.1	Apply basic electronics devices & techniques in various applications.	
ECT001.2	Implement biasing techniques to operate BJT, FET and OPAMP in different modes.	
ECT001.3	Illustrate design issues, advantages, disadvantages and limitations of circuits using basic electronics devices.	
ECT001.4	Analyze output of electronic devices in different operating modes.	
ECT001.5	Develop competence to design basic digital circuits using gates.	

BRANCH:	ME/B.Tech I		2023-24
COURSE:	B.TECH	YEAR:	I
SUBJECT:	Basic Mechanical Engineering		MET-001

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
MET001.1	Apply the Basic Mechanics theory to find the forces in static and dynamic mechanical systems	
MET001.2	Determine the forces on mechanical systems and choose the appropriate materials and examine failure due to stresses.	
MET001.3	Analyse appropriate dimensions of Mechanical system and calculate exact dimension for measuring instruments.	
MET001.4	Evaluate the heat and work and illustrate the power producing and power absorbing devices	
MET001.5	Estimate the efficiency of I.C engine and compare the of applications of I.C. Engines.	

BRANCH:	Applied Science/B.Tech I		2023-24
COURSE:	B.TECH	YEAR:	I
SUBJECT:	Engineering Chemistry Lab		AHP-002

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
AHP002.1	Apply the analytical technique used in their practical session.	
AHP002.2	Make use of the motto of given practical towards their theory.	
AHP002.3	Utilize experiment technique for future.	
AHP002.4	Solve difficult terms and their explanation.	
AHP002.5	Identify practical & its outcome in simple nature.	

BRANCH:	ECE/B.TECH I		2023-24
COURSE:	B.TECH	YEAR:	I
SUBJECT:	Basic Electronics Engineering Lab		ECP-001

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
ECP001.1	Apply basic electronics procedures to solve problems.	
ECP001.2	Analyse output of basic electronic devices for a given problem.	
ECP001.3	Conduct an experiment as an individual or as a team by using modern tools.	
ECP001.4	Examine the ideal results based on experiments.	
ECP001.5	Design small level circuits using electronic devices.	

BRANCH:	ME/B.TECH I		2023-24
COURSE:	B.TECH	YEAR:	I
SUBJECT:	Basic Mechanical Engineering Lab		MEP-001

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
MEP001.1	Apply the standard procedure to estimate the strength of material for a given specimen	
MEP001.2	Conduct the experiment of given specimen using Universal Testing Machine and impact testing machine	
MEP001.3	Analyse the output of given Problem, match with standard value	
MEP001.4	Examine the ideal results carried out based on UTM and Impact testing machine.	

MEP001.5	Summrize and submit a reports of performed experimental work for safe design.	
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BRANCH:	ME/B.TECH I		2023-24
COURSE:	B.TECH	YEAR:	I
SUBJECT:	Workshop Practices Lab		MEP-003

COURSE OUTCOMES (CO)			
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CO #	CO STATEMENT		
MEP003.1	Apply the standard procedure to measure the shape and size of specimen using specified instruments & tools.		
MEP003.2	Conduct an experiment as an individual or as a team by using modern tools for machining and other workshop practices.		
MEP003.3	Analyse the output of given problem as an individual or as a team in the trades of fitting, carpentry, welding and machining operations.		
MEP003.4	Evaluate the experimental results as an individual or as a team based on machining,welding,carpentry and fitting shop related operations.		
MEP003.5	Prepare a detailed professional engineering report on machining, carpentry work, fitting and welding processes that suitable in the given real life application.		

COURSE:	B.TECH	YEAR:	I	II
SUBJECT:	Emerging Technology in Engineering			AHP-004

COURSE OUTCOMES (CO)			
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CO #	CO STATEMENT		
AHP004.1	Apply emerging techniques / procedures to solve given real world problems		
AHP004.2	Conduct experiments as an individual or as a team by using modern tools. (modern manufacturing,advancement in transport systemtc.)		
AHP004.3	Make an effective report based on experiments.		
AHP004.4	Compare and contrast emerging technologies and make a effective report an individual or in team		
AHP004.5	Investigate the suitability of electrical vehicle in order to find the architectural pattern/ Design pattern and the materials used cost estimation in a team or individually and submit a detailed report		

BRANCH:	ECE/B.TECH I		2023-24
COURSE:	B.TECH	YEAR:	I
SUBJECT:	Computer Applications and IOT		CSP-002

COURSE OUTCOMES (CO)			
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CO #	CO STATEMENT		
CSP002.1	Perform the experiments with Linux distributions and MS Office applications to create and manipulate documents, spreadsheets, and presentations, demonstrating advanced capabilities such as macro implementation and data visualization.		
CSP002.2	Analyze and manage computer system utilities and software installations, including the use of system registry and control panel tools, to optimize system performance and troubleshoot issues.		
CSP002.3	Implement the knowledge of MS Office tools and Linux commands to solve complex problems in information systems, demonstrating the ability to select and utilize appropriate software solutions for various tasks in a business environment.		
CSP002.4	Evaluate the setup and outcomes of hardware experiments, including the dismantling and reassembling of a PC and interfacing with IoT devices like Arduino/Raspberry Pi, assessing the efficiency and accuracy of the configurations.		
CSP002.5	Develop comprehensive experiment reports that articulate the methodology, analysis, and findings from laboratory exercises, demonstrating the ability to synthesize experimental data into well-structured documents adhering to scientific reporting standards.		

BRANCH:	ECE		2023-24
COURSE:	B.TECH	YEAR:	II
SUBJECT:	Digital Electronics		ECT-003

COURSE OUTCOMES (CO)		
CO #	CO STATEMENT	
ECT003.1	Apply the boolean algebra techniques for minimization of digital functions.	
ECT003.2	Analyze combinational logic circuits using bread board and digital logic IC.	
ECT003.3	Implement Sequential circuits using flip flops and counters.	
ECT003.4	Examine the digital logic families and semiconductor memories for best digital IC parameters.	
ECT003.5	Design the digital circuits for synthesis and simulation of combinational and sequential circuits using VHDL	

BRANCH:	APPLIED SCIENCE/CSE II		2023-24
COURSE:	B.TECH	YEAR:	II
SUBJECT:	Technical Communication		AHT-007

COURSE OUTCOMES (CO)		
CO #	CO STATEMENT	
AHT007.1	Understand the nature and objective of technical communication relevant for the work place	
AHT007.2	Evaluate efficiency as fluent communicators by learning voice dynamics using various phonetics.	
AHT007.3	Analyse inputs by presentations skills to Enhance confidence in face of diverse audience in personality development	
AHT007.4	Utilize the technical writing for the exposure of dimensions (public speaking, presentations, group discussion)of technical communication.	
AHT007.5	Assess skills to promote technical competences/adhere to ethical standards in technical communication, including proper citation and plagiarism.	

BRANCH:	CSE		2023-24
COURSE:	B.TECH	YEAR:	II
SUBJECT:	Data Structures and Algorithms		CST-003

COURSE OUTCOMES (CO)		
CO #	CO STATEMENT	
CST003.1	Apply data structure concepts for realistic problems with respect to time and space complexity.	
CST003.2	Apply memory representation for stack,queue and linked list data structure.	
CST003.3		
CST003.4	Analyze non-linear data structure for finding the shortest path in a given real world problem.	
CST003.5	Evaluate the searching and sorting time complexity for a given data structure.	

BRANCH:	CSE		2023-24
COURSE:	B.TECH	YEAR:	2ND YEAR
FACULTY NAME:	Discrete Structure		CST- 002

COURSE OUTCOMES (CO)		
CO #	CO STATEMENT	
CST-002.1	Solve set theory problem and order of set based on algebraic structure .	
CST-002.2	Apply mathematical function like one, one, onto, of function to solve composite function with given range of number system.	
CST-002.3	Utilize mathematical algebraic structure like natural number, real number with binary operation* and solve problem related to ring, integral domain and field under the given operation.	
CST-002.4	Analyze numerical difference, recurrence relation equation , pigeon hole principal, and calculate numerical value using counting technique ,characterstics method, and generating function method.	
CST-002.5	Analyze graph using directed graph , euler graph, undirected graph, and solve to related problems based on graph like kornisberg bridge problem	

COURSE:	B.TECH	YEAR:	II	III
SUBJECT:	Object Oriented Programming			CST-004

COURSE OUTCOMES (CO)		
CO #	CO STATEMENT	
CST004.1	Apply key engineering fundamentals with Object-Oriented Programming to solve engineering problems.	
CST004.2	Use principles of abstraction and encapsulation for design of experiments,analysis and interpretation of data for a given class.	
CST004.3	Apply templates to conduct investigation of complex problems for creating generic functions.	

CST004.4	Optimize the design and development of Standard Template Library (STL) containers of a given problem using modern tool.	
CST004.5	Evaluate and Formulate Object-Oriented Design Patterns for solving real-world programming problems in a team.	

BRANCH:		2023-24
COURSE:	B.TECH	III
SUBJECT:	Python Programming	CST-005

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
CST005.1	Apply object-oriented concept to solve real world problem.	
CST005.2	Illustrate the process of structuring the data using lists, tuples, and dictionaries..	
CST005.3	Design a built-in functions and operations to navigate the file system.	
CST005.4	Investigate open source python modules Numpy,Pandas, Matplot lib, Flask submit report.	
CST005.5	Designed Data Analytics projects as a team using moden tools and techniques for multidisciplinary environment.	

BRANCH:		2023-24
COURSE:	B.TECH	III
SUBJECT:	Machine Learning and Pattern Recognition	SAI-301

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
SAI301.1	Apply the concepts of machine learning including supervised and unsupervised learning and model evaluation techniques for the complex engineering problems.	
SAI301.2	Analyze complex engineering problems reaching substantiated coclusions using machine learning algorithms for classification, regression, and clustering tasks.	
SAI301.3	Examine the technique for dimensionality reduction and feature selection to improve model performance and design system components.	
SAI301.4	Determine the clustering, pattern recognition and computer vision technique while considering societal issues & consequent responsibility	
SAI301.5	Recommand machine learning and pattern recognition techniques for real-world problems, recommendation systems, and fraud detection, committing to professional & ethical responsibilities	

BRANCH:	Computer Science Engineering	2023-24
COURSE:	B.TECH	III
SUBJECT:	Cyber Security and Investigation Techniques	SCS-301

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
SCS301.1	Apply the encryption algorithm to make web services more secure for cultural considerations	
SCS301.2	Apply the engineering mathematics model to implement Intrusion Detection and Prevention techniques.	
SCS301.3	Analyse the security awareness techniques for Cyber Security Vulnerabilities and Safeguards.	
SCS301.4	Evaluate the performance and troubleshoot cyber security systems using modern engineering and IT Tools	
SCS301.5	Design web application, Services and Servers for societal and environmental benefits	

BRANCH:		2023-24
COURSE:	B.TECH	III
SUBJECT:	Virtual reality designing	SAR-301

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
SAR301.1	Apply engineering techniques to develop application for 3D virtual reality in practical scenarios	
SAR301.2	Select advanced VR tools to customize the VR and 3D interface.	
SAR301.3	Analyze the effectiveness of 3D user interfaces for real-world engineering problems using modern and IT tools.	
SAR301.4	Evaluate the impact of VR in education, health, and other domains to assess societal safety legal and cultural issues	
SAR301.5	Create new VR applications tailored to specific industries or educational needs.	

BRANCH:		2023-24
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COURSE:	B.TECH	YEAR:	II	III
SUBJECT:	Sensor Technology			SIT-301

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
SIT301.1	Apply units of measurement to sensor parameters and force, strain, and tactile sensors in various applications.	
SIT301.2	Utilize sensors for position, displacement, and level measurements.	
SIT301.3	Analyze and compare sensor technologies based on materials and classify them based on their characteristics and applications.	
SIT301.4	Evaluate the importance of surface processing in sensor technologies and measure the velocity and acceleration using appropriate sensors.	
SIT301.5	Construct bridge circuits, amplifiers and excitation circuits for sensor interfacing and sensor applications and design input characteristics for interface circuits.	

BRANCH:		2023-24
COURSE:	B.TECH	YEAR: II
SUBJECT:	Object Oriented Programming Lab	CSP-004

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
CSP004.1	Apply Object Oriented Procedures to solve the real world problem.	
CSP004.2	Analyze the output of given problem.	
CSP004.3	Conduct Experiment as an Individual or team using modern tool(ReSharper C++, HeapTrack,PVS-Studio).	
CSP004.4	Implement the given problem using the dynamic memory allocation techniques.	
CSP004.5	Write an effective report based on the given experiments.	

BRANCH:	CSE	2023-24
COURSE:	B.TECH	YEAR: II
SUBJECT:	Data Structures and Algorithms Lab	CSP-003

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
CSP003.1	Apply appropriate data structures like arrays, linked list, stacks and queues to solve real world problems.	
CSP003.2	Design algorithms for given applications using non-linear data structures.	
CSP003.3	Analyze performance of given techniques for searching and sorting algorithm.	
CSP003.4	write effective lab report based on given experiments	
CSP003.5		

BRANCH:		2023-24
COURSE:	B.TECH	YEAR: II
SUBJECT:	Python Programming LAB	CSP-005

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
CSP005.1	Apply Python's basic syntax, data types, and control structures use variables, loops, and conditionals statement effectively.	
CSP005.2	Perceive problem-solving skills and their ability to think algorithmically & able to analyze problems and implement solutions in using appropriate data structures and algorithms.	
CSP005.3	Explain Debugging and Troubleshooting to identify and fix common programming errors, effectively use debugging tools, and understand best practices for error handling.	
CSP005.4	Compare Data Manipulation and Analysis of data structures (e.g., lists, dictionaries), and conducting basic data analysis using libraries like NumPy and Pandas	
CSP005.5	Implement projects using modern tools: Jupyter, Google Colab, Vs Code.	

BRANCH:		2023-24
COURSE:	B.TECH	YEAR: II
		III

SUBJECT:	Internship-I/Mini Project-I*	CSP-006
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COURSE OUTCOMES (CO)		
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CO #	CO STATEMENT	
CSP006.1	Apply technical knowledge in an industry to formulate real world engineering problems	
CSP006.2	Apply ethical principles based on relevant knowledge, concepts and theories within an industrial organization	
CSP006.3	Write effective report for work done in mini project	
CSP006.4	Analyze the functioning of internship organization and recommend changes for improvement in processes	
CSP006.5	Evaluate industrial problems to find possible solutions using modern engineering and IT Tools.	

BRANCH:		2023-24
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COURSE:	B.TECH	YEAR:	II	IV
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SUBJECT:	Computer Organization and Architecture	CST-007
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COURSE OUTCOMES (CO)		
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CO #	CO STATEMENT	
CST007.1	Solve the given multiplication problem using Booth's Multiplication Algorithm for the knowledge of engineering & Science.	
CST007.2	Apply basic knowledge of mathematics and logical operations to efficiently organised the data in memoy.	
CST007.3	Investigate the design issues of circuits in order to accomplish the solution to complex problem.	
CST007.4	Apply morden tools and techniques to analyse the computer sysem performance.	
CST007.5	Inspect the need for I/O, pipelining and memory organization concept to achieve computer system performance.	

COURSE OUTCOME	CST007.1	Solve the given multiplication problem using Booth's Multiplication Algorithm for the knowledge of engineering & Science.
PROGRAM OUTCOME	PO-01:	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialisation for the solution of complex
PERFORMANCE INDICATOR	PI_1.2.1	Apply the knowledge of discrete structures, linear algebra, statistics and numerical techniques to solve problems.
HIGHEST EXPECTED QUESTION	Q1	Solve the multiplication problem using Booth's Multiplication Algorithm.
HIGHEST EXPECTED STUDENT ACTIVITY	A1	Write the Booth's Algorithm correctly and draw the flow diagram.
	A2	Trace the algorithm with an example.

COURSE OUTCOMES (CO)		
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CO #	CO STATEMENT	
CST008.1	Apply the knowledge of engineering fundamentals with java programming construct to solve a problem.	
CST008.2	Analyze the role of packages and interfaces to build a java application for a problem.	
CST008.3	Identify a real world problem to implement exception handling, file handling and multithreading in java	
CST008.4	Select appropriate techniques to design and Develop a project of web applications based on JDBC, RMI and Servlet methodologies for a given system.	
CST008.5	Design GUI based JAVA enterprise applications using research based knowledge	

FACULTY NAME:	MOHD. MURSLEEN
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BRANCH:		2023-24
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COURSE:	B.TECH	YEAR:	II	IV
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SUBJECT:	Formal Languages & Automata Theory	CST-009
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COURSE OUTCOMES (CO)		
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CO #	CO STATEMENT	
CST009.1	Apply the concept of mathematical models to develope theoretical computer science machine.	
CST009.2	Apply turing machine to propose computation solution.	
CST009.3	Analyse a given problem is decidable or not.	
CST009.4	Design an automata for any given pattern and to write context free grammar for any language.	
CST009.5	Evaluate regular expression for any string pattern.	

FACULTY NAME:	DR. NIRMENDRA		
BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	II
SUBJECT:	Deep Machine Learning With Visual Computing		SAI-401

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
SAI401.1	Apply different components of deep learning architectures and their impact on visual computing tasks.	
SAI401.2	Apply deep learning algorithms and techniques to solve real-world problems in visual computing.	
SAI401.3	Analyze the performance of deep learning models in image recognition and computer vision.	
SAI401.4	Analyze the effectiveness of pre-processing techniques and data augmentation strategies for improving model performance.	
SAI401.5	Evaluate novel insights and visualizations from deep learning models to provide meaningful interpretations for real-world visual data.	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	II
SUBJECT:	Cryptography and Security Laws		SCS-401

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
SCS401.1	Apply different encryption techniques to solve real world Engineering problem to achieve higher degree of network security.	
SCS401.2	Design a security solutions for the computing system on the basis of vulnerabilities.	
SCS401.3	Identify the authentication schemes for membership authorization.	
SCS401.4	Evaluate security mechanisms on the basis of key ciphers and Hash functions.	
SCS401.5	Demonstrate network security applications , IPSEC, Firewall, IDS, for web security .	/Analyze and model the Symmetric cryptographic algorithms for information security.

FACULTY NAME:	MR. RAKESH		
BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	II
SUBJECT:	Exploring Rx Java in Android		SAN-401

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
SAN401.1	Apply RxJava to handle asynchronous operations in Android apps.	
SAN401.2	Analyze the flow of data through an RxJava pipeline in complex use cases.	
SAN401.3	Evaluate the readability and maintainability of code written with RxJava.	
SAN401.4	Design and implement complex Android features or applications using RxJava.	
SAN401.5	Create custom RxJava operators to address unique project requirements.	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	II
SUBJECT:	Augmented & virtual reality		SAR-401

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
SAR401.1	Apply 3D interaction techniques in practical scenarios using modern and IT tools	
SAR401.2	Apply custom software solutions for VR and 3D interfaces	
SAR401.3	Analyze the effectiveness of 3D user interfaces for real-world engineering problems	
SAR401.4	Evaluate the impact of VR in education, medicine, and other domains to assess societal safety legal and cultural issues	
SAR401.5	Create new VR applications tailored to specific industries or educational needs	

BRANCH:				2023-24
COURSE:	B.TECH	YEAR:	II	IV
SUBJECT:	CLOUD ARCHITECTURES			SIT-401

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
SIT401.1	Apply the advanced cloud base tools to find solutions of a problem.	
SIT401.2	Compare and contrast different cloud architectural patterns and their suitability for different use cases.	
SIT401.3	Analyze case studies of organizations that have successfully implemented cloud architectures and identify best practices.	
SIT401.4	Evaluate the reliability, availability, and security of services deployed from the cloud, as well as their performance and scalability.	
SIT401.5	Develop a cloud-based application using a chosen cloud service development environment.	

BRANCH:				2023-24
COURSE:	B.TECH	YEAR:	II	IV
SUBJECT:	Computer Organization and Architecture Lab			CSP-007

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
CSP007.1	Apply logic gates to implement multiplexer.	
CSP007.2	Perform the experiment using modern tools (Digital Design Circuit) as an individual or as a team.	
CSP007.3	Analyze the accuracy of circuit output a given inputs.	
CSP007.4	Analysis and interpretation of data to identify the techniques to be used to solve the given problem.	
CSP007.5	Construct the effective report in prescribed documentation format.	

BRANCH:				2023-24
COURSE:	B.TECH	YEAR:	II	IV
SUBJECT:	JAVA Programming Lab			CSP-008

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
CSP008.1	Apply the basic syntax, structure and concepts of Java programming.	
CSP008.2	Implement the java programming packages, interface and multithreading to develop web based application.	
CSP008.3	Analyze the output for a given problem	
CSP008.4	Conduct experiments as an individual or as a team by using modern tools (visual studio, net beans)	
CSP008.5	Write an effective report lab based on experiments	

BRANCH:				2023-24
COURSE:	B.TECH	YEAR:	II	IV
SUBJECT:	UNIX/LINUX Lab			CSP-009

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
CSP009.1	Apply basic and advanced Unix commands to organize file system.	
CSP009.2	Apply the shell scripting commands to customize the user work environment.	
CSP009.3	Identify the types of IPCs, compare and contrast the same.	
CSP009.4	Write Regular expressions for pattern matching and apply filters for a specific task	
CSP009.5	Construct the effective report & design prescribed documentation.	

COURSE:	B.TECH	YEAR:	III	V
SUBJECT:	Operating Systems			BCST-501

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST-501.1	Apply the engineering knowledge concepts for operating system and their functions to solve engineering problem.	
BCST-501.2	Analyze and formulate the problems of various processes and scheduling algorithms.	

BCST-501.3	Apply and design the solution for deadlock & recovery techniques in real or simulated scenarios and assess their effectiveness.	
BCST-501.4	Conduct investigation of various secondary storage algorithms and techniques for complex problems.	
BCST-501.5	Evaluate the performance of windows, Linux and mac os based on various performance criteria for reasoning informed by the contextual knowledge of engineering practice.	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Design and Analysis of Algorithms		BCST-503

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST-503.1	Calculate and compare efficiency of standard algorithms for problems in fundamental areas of computer science and engineering using asymptotic complexity.	
BCST-503.2	Apply prior knowledge standard algorithm design techniques and mathematics to solve fundamental problems in computer science and engineering	
BCST-503.3	Apply prior knowledge of standard algorithm design techniques and mathematics to design efficient algorithms for moderately difficult new computational problems.	
BCST-503.4	Investigate as an individual and in a team 10 algorithm design techniques available in the literature and submit a report containing their relative merits and demerits based on performance measures.	
BCST-503.5	Evaluate mathematically the quality and correctness of the new proposed novel solutions of a given real world engineering problem.	

COURSE:	B.TECH	YEAR:	III	V
SUBJECT:	Network Architecture			BCST 504 (A)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST-504A.1	Apply the principles of Data Communication and protocols used in communication.	
BCST-504A.2	Implement channel allocation, framing, error and flow control techniques.	
BCST-504A.3	Analyze computer science theory and software development fundamentals to produce computing-based solutions	
BCST-504A.4	Identify a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions	
BCST-504A.5	Evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Pattern Recognition		BCST 504 (B)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST-504B.1	Apply pattern recognition algorithms to solve real-world classification problems.	
BCST-504B.2	Analyze the results of pattern recognition algorithms and analyze their performance metrics.	
BCST-504B.3	Design a novel pattern recognition system for a specific problem.	
BCST-504B.4	Develop pattern recognition models using machine learning libraries.	
BCST-504B.5	Evaluate the trade-offs between accuracy and computational complexity in pattern recognition systems.	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Internet and Web Technology		BCST 504 (C)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST-504C.1	Apply the concepts of Internet and WebTechnologies.	
BCST-504C.2	Analyze a given website and Prepare limitations of the the given website	
BCST-504C.3	Create custom reports, customize/personalize layouts, integrate it with web applications, and protect sensitive data.	
BCST-504C.4	Design website or web application for a given scenario using Modern Tools.	
BCST-504C.5	Investigate available modern website design as a individual or as Team.	

FACULTY NAME:	Dr. Bharti Kalra
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BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Java Programming		BCST 504 (D)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT
BCST-504D.1	Apply the knowledge of engineering fundamentals with java programming construct to solve a problem.
BCST-504D.2	Analyze the role of packages and interfaces to build a java application for a problem.
BCST-504D.3	Identify a real world problem to implement exception handling, file handling and multithreading in java
BCST-504D.4	Select appropriate techniques to design and Develop a project of web applications based on JDBC, RMI and Servlet methodologies for a given system.
BCST-504D.5	Design GUI based JAVA enterprise applications using research based knowledge

BRANCH:	CSE		2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Principles of Programming Languages		BOCS-505 (A)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT
BOCS-505A.1	Apply the concepts of elementary and structured data types in programming to formulate the problem to reach the substantiated conclusion.
BOCS-505A.2	Apply suitable programming paradigm for the application using modern engineering and IT tools
BOCS-505A.3	Analyze sequence control mechanisms, including implicit and explicit sequence control.
BOCS-505A.4	Evaluate the use of recursion and exception handling in programming to design a website using engineering problems.
BOCS-505A.5	Create a program in distinct language paradigms that meet the specific needs with appropriate environmental consideration

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Modeling and Simulation		BOCS-505 (B)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT
BOCS-505B.1	Apply the appropriate techniques to model and analyze systems involving queues and waiting times.
BOCS-505B.2	Apply discrete event simulation techniques to create a single-server single queue model.
BOCS-505B.3	Analyze first and second order linear and non linear systems in time and frequency domain.
BOCS-505B.4	Evaluate the efficiency of discrete event simulation in representing dynamic systems.
BOCS-505B.5	Create mathematical models for engineering systems in distinct domains and derive analogies

BRANCH:	Computer Science & Engineering		2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Innovation and Entrepreneurship		BOCS-505(D)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT
BOCS-505D.1	Identify the elements and process of successful entrepreneurial ventures with lifelong learning for engineering specialization.
BOCS-505D.2	Apply the reasoning informed by contextual knowledge to compare the components of the entrepreneurial ecosystem, existing business models, and different organizational structures.
BOCS-505D.3	Analyze the feasibility and potential of entrepreneurial opportunities and various sources of raising finance for start-up ventures to effectively work as an individual or a member of team
BOCS-505D.4	Evaluate decision-making process, principles, and venture finance knowledge for entrepreneurial development and pitching to manage projects in multidisciplinary environments.
BOCS-505D.5	Create a business model canvas using design system components for societal and environmental considerations.

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Principles of Deep Learning		SAI-501

COURSE OUTCOMES (CO)

CO #	CO STATEMENT
SAI 501.1	Apply the concepts in deep machine learning, for neural networks, activation functions, and backpropagation.

SAI 501.2	Apply the mathematical foundations of deep learning, including linear algebra, calculus, and probability theory to develop neural network Algorithm.	
SAI 501.3	Analyze appropriate optimization techniques to improve the performance of deep learning models.	
SAI 501.4	Demonstrate the impact of hyperparameters and architecture choices on the performance of a deep learning model.	
SAI 501.5	Evaluate deep learning models using decision-making to develop real-world applications.	

BRANCH:	Computer Science & Engineering		2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Risk Management		V
			SCS-501

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
SCS501.1	Apply risk management techniques to formulate exposure of risk using principle of mathematics	
SCS501.2	Select the Wrong-way and right-way risk to calculate the exposure of risk for the societal benefit	
SCS501.3	Analyse the performance of Rating-based models for credit portfolio view using principle of engineering Mathematics	
SCS501.4	Evaluate Measures of exposure settlement risk using engineering solutions	
SCS501.5	Create the Credit Metrics of business models using portfolio view in order to provide valid conclusion	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Concepts of Digital Manufacturing		V
			SAR-501

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
SAR-501.1	Describe the integration of digital technologies in the manufacturing industry.	
SAR-501.2	Apply digital manufacturing concepts to solve real-world problems.	
SAR-501.3	Analyze the impact of digitalization on traditional manufacturing processes.	
SAR-501.4	Evaluate the advantages and disadvantages of implementing digital technologies in manufacturing.	
SAR-501.5	Design a digital manufacturing strategy for a specific product in a Group	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Microcontrollers and Its Interfacing (Using Embedded C)		V
			SIT-501

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
SIT501.1	Apply microcontrollers to solve real-world engineering problems.	
SIT501.2	Analyze the basic architecture and operation of microcontrollers.	
SIT501.3	Design digital circuits using hardware description language (HDL).	
SIT501.4	Develop Program microcontrollers using assembly language and embedded C.	
SIT501.5	Demonstrate microcontrollers with peripherals using analog-to-digital converters (ADCs), digital-to-analog converters (DACs), and timers.	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Operating System Lab		V
			BCSP-501

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCSP501.1	Apply operating system algorithms for scheduling ,page replacement and memory mmanagment to solve the given numerical problem.	
BCSP501.2	Implement UNIX I/O system calls to create, read, and write files, gaining hands-on experience in file and data manipulation.	
BCSP501.3	Implement the CPU scheduling Algorithm and memory management algorithm.	
BCSP501.4	Analyze the output of implemented solution of a given real world engineering problem with multiple inputs to ensure the correctness and efficiency of algorithm.	
BCSP501.4	Make an effective laboratory report based on experiments performed as per given format.	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
			V

SUBJECT:	Computer Networks Lab	BCSP-502
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COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCSP502.1	Analyse and configure protocols concerning various network technologies over different mediums and layers	
BCSP502.2	Apply the knowledge of different network components, transmission mediums and tools to solve various problems of communication.	
BCSP502.3	Design and develop different network design and logical models of networking to solve network related problems.	
BCSP502.4	Utilize knowledge of modern network simulation tools to propose solution for efficient working of networks for real world problems.	
BCSP502.5	make use of various troubleshooting methods to overcome networking problems.	

BRANCH:		2023-24
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COURSE:	B.TECH	YEAR:	III	VI
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SUBJECT:	Virtual Lab(UNIX/LINUX/PYTHON, JAVA etc)	BCST-506
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COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST506.1	Apply Python programming to retrieve standard libraries and commonly used modules.	
BCST506.2	Apply the fundamental concepts of object-oriented programming (OOP) .	
BCST506.3	Write Python scripts to solve simple computational problems and perform basic data manipulation tasks.	
BCST506.4	Analyze and debug Python code to identify and rectify logical errors, syntax errors, and runtime exceptions.	
BCST506.5	Develop Python-based solutions for specific domain applications, for data analysis, web scraping, or scientific simulations.	

BRANCH:		2023-24
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COURSE:	B.TECH	YEAR:	III	VI
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SUBJECT:	Microprocessors and its Applications	BCST-601
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COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST-601.1	Apply microprocessor techniques to solve problems.	
BCST-601.2	Analyze 8086 microprocessor for a given problem.	
BCST-601.3	Examine 8085 and 8086 microprocessor using assembly language programs.	
BCST-601.4	Implement assembly language program in 8086 microprocessor.	
BCST-601.5	Design small circuits using microcontrollers.	

FACULTY NAME:	MR. B K SHARMA
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BRANCH:		2023-24
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COURSE:	B.TECH	YEAR:	III	VI
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SUBJECT:	Compiler Design	BCST-602
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COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST602.1	Apply the knowledge of theory of computation in specifying and recognizing tokens	
BCST602.2	Design compiler generators for a given CFG(Context-Free Grammar) using modern compiler construction tools.	
BCST602.3	Convert the given source program instruction into Intermediate code using three address code and then into target code.	
BCST602.4	Analyze a given program and minimize the code by using optimizing techniques.	
BCST602.5	Conduct investigation in a group on code optimization techniques in compiler design by reading at least 15 Journals, Articles or Research papers and submit a report that provide valid conclusions.	

BRANCH:		2023-24
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COURSE:	Data Analytics	VI
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SUBJECT:		BCST-603
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COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST603.1	Apply techniques to extract data from various sources, including databases, APIs, and web scraping to develop proficiency in Data Collection	
BCST603.2	Apply various data analysis techniques, such as regression, clustering, and hypothesis testing.	

BCST603.3	Develop hands-on experience in using these tools to perform real-world data analytics tasks such as Python, R, Excel,	
BCST603.4	Investigate case studies and practical examples from industries to understand the impact of data analytics on decision-making processes.	
BCST603.5	Develop the ability to present data findings and insights through clear and compelling data visualizations and reports.	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Graph Theory		VI
			BCST-604(A)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST604A.1	Demonstrate the basic concepts of graph theory, including vertices, edges for the solution of complex engineering problems.	
BCST604A.2	Apply graph algorithms, including Breadth-First Search (BFS), Depth-First Search (DFS), Dijkstra's Algorithm, and Kruskal's Algorithm for reaching substantiated conclusions using principles of mathematics.	
BCST604A.3	Examine key properties and characteristics of graphs, such as connectivity, planarity, Hamiltonian and Eulerian paths/cycles, chromatic numbers, and graph isomorphism to design system components and	
BCST604A.4	Select the appropriate graph to design a system, component or process within realistic constraints individually or in group.	
BCST604A.5	Interpret practical applications of graph theory in diverse fields of computer science, transportation, social networks, and biology effectively for lifelong learning.	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	DATA MINING		VI
			BCST-604(B)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST604B.1	Apply pre-processing techniques for data cleaning.	
BCST604B.2	Identify and design multidimensional models for data warehousing	
BCST604B.3	Analyze performance of algorithms for Association Rules, Classification and Clustering techniques.	
BCST604B.4	Evaluate the data mining algorithms to solve real world engineering problems.	
BCST604B.5	Develop research interest towards advances in data mining.	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Computer Graphics and Visualizations		VI
			BCST-604(C)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST604C.1	Apply computer graphics concepts, techniques, and algorithms to solve practical problems.	
BCST604C.2	Apply multimedia techniques to develop complex multimedia projects.	
BCST604C.3	Analyze the selection of appropriate visualization techniques for diverse data types.	
BCST604C.4	Investigate visual representations using principles of 2D and 3D graphics.	
BCST604C.5	Evaluate the use of graphic software tools to produce interactive multimedia content	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Software Quality Managements		VI
			BCST-604(D)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST604D.1	Implement software quality management principles to assess and enhance software quality in software projects.	
BCST604D.2	Apply software testing tools and techniques to identify and correct software defects.	
BCST604D.3	Analyze the software development process to identify potential quality risks.	

BCST604D.4	Compare ISO9000 and CMM-based quality management models in quality assurance.	
BCST604D.5	Evaluate the effectiveness of software quality assurance processes.	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Digital Signal Processing		VI
			BOCS -605(A)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BOCS605A.1	Make use of the fundamental concepts of signals and systems along with linear algebra, numerical techniques, and engineering mathematics in the processing and analyzing real-world signals.	
BOCS605A.2	Apply the properties of transformation techniques in the designing and analysis of digital systems.	
BOCS605A.3	Design and implement signal processing systems using DSP hardware and software tools.	
BOCS605A.4	Investigate and propose improvements to existing DSP techniques.	
BOCS605A.5	Demonstrate the ability to work in teams to solve DSP-related problems.	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Software Testing		VI
			BOCS -605(C)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BOCS605C.1	Apply a wide variety of testing techniques in an effective and efficient manner..	
BOCS605C.2	Analyze requirements to determine appropriate testing strategies.	
BOCS605C.3	Compute test coverage and yield according to a variety of criteria.	
BOCS605C.4	Evaluate the limitations of a given testing process and provide a succinct summary of those limitations	
BOCS605C.5	Evaluate the limitations of a given testing process and provide a succinct summary of those limitations.	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Microprocessors and Applications Lab		VI
			BCSP -601

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCSP601.1	Apply microprocessor techniques to solve problems.	
BCSP601.2	Analyze 8086 microprocessor for a given problem.	
BCSP601.3	Examine the output of 8086 and 8086 microprocessor using assembly language program	
BCSP601.4	Implement 8086 assembly language program using modern tools.	
BCSP601.5	Design small circuits using microcontroller.	

FACULTY NAME:	MR. B K SHARMA		
BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	III
SUBJECT:	Compiler Design Lab		VI
			BCSP -602

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCSP602.1	Design lexical analyzer and parser for a given language using modern tools	
BCSP602.2	Implement the scanner and parser for a given language using modern programming language.	
BCSP602.3	Analyze the output of the scanner and parser to see whether scanner identifies the tokens of given language and parser the correctly parses the given input that confirms to the grammar of the language.	
BCSP602.4	Investigate as an individual and in a team latest research on compiler development available in the literature and submit a report.	
BCSP602.5	Make an effective laboratory report based on experiments performed.	

BRANCH:			2023-24
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COURSE:	B.TECH	YEAR:	III	VI
SUBJECT:	Data Analytics Lab			BCSP -603

COURSE OUTCOMES (CO)

CO #	CO STATEMENT
BCSP603.1	Apply "Exploratory Data Analysis (EDA)" technique to gain meaningful insights for decision-making processes
BCSP603.2	Apply statistical methods and hypothesis testing to draw meaningful & choose and implement appropriate statistical tests, interpret results, and make data-driven recommendations based on statistical findings.
BCSP603.3	Compare various visualization tools and techniques to select the most appropriate visualization methods based on the nature of the data.
BCSP603.4	Implement machine learning algorithms to real-world datasets for predictive modeling and classification tasks.
BCSP603.5	Elaborate how to leverage distributed computing frameworks, such as Apache Spark on massive datasets.

BRANCH:		2023-24
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COURSE:	B.TECH	YEAR:	III	VI
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SUBJECT:	Open Source Lab/ Matlab Programming			BCSP -606
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COURSE OUTCOMES (CO)

CO #	CO STATEMENT
BCSP606.1	Apply the need for simulation/implementation for the verification of mathematical functions.
BCSP606.2	Apply the main features of the MATLAB/SCILAB program development environment to enable their usage in the higher learning.
BCSP606.3	Analyze the program for correctness and determine/estimate/predict the output and verify it under simulation
BCSP606.4	Implement simple mathematical functions/equations in numerical computing environment using MATLAB/SCILAB.
BCSP606.5	Interpret and visualize simple mathematical functions and operations thereon using plots/display.

BRANCH:		2023-24
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COURSE:	B.TECH	YEAR:	III	VI
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SUBJECT:	Minor Project -I			BCSP -607
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COURSE OUTCOMES (CO)

CO #	CO STATEMENT
BCSP607.1	Identify and Define a specific engineering problem or challenge.
BCSP607.2	Apply project management principles to the planning and execution of a small project using modern tools and techniques.
BCSP607.3	Collaborate effectively within a team, demonstrating the ability to communicate ideas, delegate tasks, and resolve conflicts.
BCSP607.4	Apply theoretical concepts taught in earlier courses to tackle real-world engineering challenges as a team or individual.
BCSP607.5	Demonstrate competence in using tools, technologies, or programming languages relevant to the project

BRANCH:		2023-24
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COURSE:	B.TECH	YEAR:	IV	VII
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SUBJECT:	NET FRAMEWORK AND PROGRAMMING			BCST-701
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COURSE OUTCOMES (CO)

CO #	CO STATEMENT
BCST701.1	Differentiate the relationship between C# code and its corresponding Intermediate Language (IL) representation.
BCST701.2	Apply the features of object oriented programming concepts in designing classes of a given real world engineering problem.
BCST701.3	Design C# solution for web development using ASP.NET .
BCST701.4	Analyze the efficiency and performance of .NET applications and also identify areas for optimization and improvement.
BCST701.5	Evaluate comprehensive and visually appealing Crystal Reports that meet the specific reporting needs of a project individually or in team.

BRANCH:		2023-24
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COURSE:	B.TECH	YEAR:	IV	VII
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SUBJECT:	Adhoc and Wireless Networks			BCST-702
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COURSE OUTCOMES (CO)

CO #	CO STATEMENT
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BCST702.1	Apply the prior knowledge of structure of Ad Hoc network and its basic characteristics in designing of Ad Hoc network of a given scenario.	
BCST702.2	Apply the concept of MAC protocols and its classification in a given scenario.	
BCST702.3	Identify and apply the algorithms and applications of Routing protocols and its classification for different scenarios.	
BCST702.4	Analyze the basic wireless networks: Cellular architecture and IEEE 802.11 standards.	
BCST702.5	Evaluate the various security protocols for Ad HOC wireless network for designing real-world Ad HOC Network in a team.	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	IV
SUBJECT:	Human Computer Interfacing		BCST-703(A)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST703A.1	Apply different user interface design component to make GUI functionality better.	
BCST703A.2	Identify the importance of human characteristics and business functions.	
BCST703A.3	Analyze screen design principles to make intelligent choices in interface design based on technical concerns.	
BCST703A.4	Design the window, device and screen based controls through navigation schemes and make overall structure of a GUI that allows users to find their way around.	
BCST703A.5	Implement HCI techniques to develop effective UIs using Adobe XD, Sketch, Proto.io, Marvel	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	IV
SUBJECT:	Advanced Computer Architectures		BCST-703(B)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST703A.1	Apply RISC and CISC architectures to categorize instructions, and understand addressing modes using modern IT tools.	
BCST703A.2	Identify and examine pipeline hazards and their solutions to conduct investigations of complex Problems.	
BCST703A.3	Analyze the internal organization of a GPU for engineering and society.	
BCST703A.4	Design strategies for high-performance interconnection networks to solve complex engineering problems.	
BCST703A.5	Evaluate the design issues with multi-cycle pipelines and the case study of the MIPS R4000 pipeline in teamwork.	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	IV
SUBJECT:	Soft Computing		BCST-703(C)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST703C.1	Recognize the feasibility of applying a soft computing methodology for a particular problem.	
BCST703C.2	Implement the solutions by various soft computing approaches for finding the optimal solutions of a particular problem.	
BCST703C.3	Compare the solutions by various soft computing approaches for finding the solutions of a problem.	
BCST703C.4	Design the methodology to solve problem and decision making using fuzzy logic, genetic algorithms and neural networks	
BCST703C.5	Evaluate solutions by various soft computing approaches for finding the optimal solutions	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	IV
SUBJECT:	Internet-of-Things Systems		BCST-703(D)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST703D.1	Demonstrate the engineering knowledge of Internet of Things and web of things including their convergences ,applications ,strategic research direction ,future technologies and related standarization.	
BCST703D.2	Apply IOT design and development concepts for iot solutions.	

BCST703D.3	Apply basic IoT solutions to various industries understanding the value creation and implications in contexts such as future factories, retail, oil and gas, home management, and eHealth.	
BCST703D.4	Investigate reasoning informed by the contextual knowledge in IoT application domain to analyze their performance.	
BCST703D.5	Analyze various security and privacy issues in IOT and future scope of security and privacy issues.	

FACULTY NAME:		MR. SHARAD
COURSE:	B.TECH	YEAR: IV
SUBJECT:	Big Data Processing	VII
		BOCS-704(A)

COURSE OUTCOMES (CO)	
CO #	CO STATEMENT
BOCS704A.1	Apply the engineering principles of Big Data Analytics concepts and its applications to solve real world engineering problem.
BOCS704A.2	Design the CLI commands to query the hadoop framework.
BOCS704A.3	Demonstrate the functionality of Map Reduce Framework for distributed data.
BOCS704A.4	Analyze the fundamental tools and methods of data analysis and statistics.
BOCS704A.5	Apply modern tools MapReduce & bigdata to solve real world distributed data problems as a team.

BRANCH:			2023-24
COURSE:	B.TECH	YEAR: IV	VII
SUBJECT:	Digital Image Processing		BOCS-704(B)

COURSE OUTCOMES (CO)	
CO #	CO STATEMENT
BOCS704B.1	Make use of digital image fundamentals for image transformation.
BOCS704B.2	Implement basic image processing algorithms or techniques.
BOCS704B.3	Demonstrate the Image Segmentation and Morphological Image Processing
BOCS704B.4	Compare color models,pseudo color image processing and full color image processing.
BOCS704B.5	Summarize Image restroration using degradation model,Least Mean Square Filters,Constrained Least Squares Filters.

BRANCH:			2023-24
COURSE:	B.TECH	YEAR: IV	VII
SUBJECT:	.NET Framwork and Programming Lab		BCSP-701

COURSE OUTCOMES (CO)	
CO #	CO STATEMENT
BCSP701.1	Apply the knowledge of .NET's C# language syntax and semantics to write and execute given program
BCSP701.2	Create C# programs based on object oriented principles for a given problem.
BCSP701.3	Write a GUI application for a given problem using ADO .Net
BCSP701.4	Develop business oriented web based solution for ERP ,Using modern tools.
BCSP701.5	Develop client-server application to solve real world industrial problem using ASP.Net.

BRANCH:			2023-24
COURSE:	B.TECH	YEAR: IV	VII
SUBJECT:	Adhoc and Wireless Networks Lab		BCSP-702

COURSE OUTCOMES (CO)	
CO #	CO STATEMENT
BCSP702.1	Implement the TCP for wireless adhoc and sensor networks.
BCSP702.2	Illustrate wireless networks.
BCSP702.3	Identify the various routing algorithms for different scenarios.
BCSP702.4	Develop wireless adhoc network for various constraints and scenarios.
BCSP702.5	Design the environment for appropriate physical and mac layer protocols in wireless adhoc networks.

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	

SUBJECT:	Virtual Lab			
COURSE OUTCOMES (CO)				
CO #	CO STATEMENT			
BCSP705.1	Apply standard libraries and commonly used modules of python programming to solve real world engineering problem.			
BCSP705.2	Implement the fundamental concepts of object-oriented programming (OOPS) in python script.			
BCSP705.3	Write Python scripts to solve simple computational problems and perform basic data manipulation tasks.			
BCSP705.4	Analyze the output of implemented solution of a given real world engineering problem with multiple inputs to ensure the correctness and efficiency of algorithm.			
BCSP705.5	Make an effective laboratory report based on experiments performed as per given format.			

BRANCH:				2023-24
COURSE:	B.TECH	YEAR:	IV	VII
SUBJECT:	Evaluation of Internship-III completed at III year level			BCSP-706

COURSE OUTCOMES (CO)				
CO #	CO STATEMENT			
BCSP706.1	Identify the problem statement undertaken during the internship.			
BCSP706.2	Apply the practical knowledge and skills acquired during the internship to solve engineering problem.			
BCSP706.3	Demonstrate the ability to adapt and apply classroom learning to diverse internship tasks.			
BCSP706.4	Collaborate with team members and colleagues, demonstrating the ability to work cohesively in a professional setting.			
BCSP706.5	Develop a personalized plan for future career development based on insights gained during the internship.			

BRANCH:				2023-24
COURSE:	B.TECH	YEAR:	IV	VII
SUBJECT:	Minor Project-II			BCSP-707

COURSE OUTCOMES (CO)				
CO #	CO STATEMENT			
BCSP707.1	Identify and Define a specific engineering problem or challenge.			
BCSP707.2	Apply project management principles to the planning and execution of a small project using modern tools and techniques.			
BCSP707.3	Collaborate effectively within a team, demonstrating the ability to communicate ideas, delegate tasks, and resolve conflicts.			
BCSP707.4				
BCSP707.5	Demonstrate competence in using tools, technologies, or programming languages relevant to the project			

BRANCH:				2023-24
COURSE:	B.TECH	YEAR:	IV	VIII
SUBJECT:	Advanced Operating Systems			BCST-801

COURSE OUTCOMES (CO)				
CO #	CO STATEMENT			
BCST801.1	Apply the engineering knowledge concepts for operating system and their functions to solve engineering problem			
BCST801.2	Analyze and formulate the problems of various processes and scheduling algorithms.			
BCST801.3	Select appropriate approaches for building a range of distributed systems, including some that employ middleware			
BCST801.4	Demonstrate proficiency in using essential Unix/Linux commands for file manipulation, navigation, permissions, and process management.			
BCST801.5	Evaluate the performance of windows, linux and mac os based on various performance criteria for reasoning informed by the contextual knowledge of engineering practice.			

BRANCH:				2023-24
COURSE:	B.TECH	YEAR:	IV	VIII
SUBJECT:	Cryptography and Network Security			BCST-802

COURSE OUTCOMES (CO)				
CO #	CO STATEMENT			
BCST802.1	Apply different encryption techniques to solve real world Engineering problem to achieve higher degree of network security.			
BCST802.2	Design a security solutions for the computing system on the basis of vulnerabilities.			

BCST802.3	Identify information system requirements for both of them such as client and server	
BCST802.4	Evaluate security mechanisms on the basis of key ciphers and Hash functions.	
BCST802.5	Demonstrate network security applications , IPSEC, Firewall, IDS, for web security .	

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	IV
SUBJECT:	Speech and Natural Language Processing		BCST-803(A)

COURSE OUTCOMES (CO)	
CO #	CO STATEMENT
BCST803A.1	Apply different AI -models and modern tools to solve complex and real time engineering problem.
BCST803A.2	Implement the concepts of word sense, disambiguation, semantic parsing and subjectivity and sentiment analysis to solve real world engineering problem.
BCST803A.3	Evaluate probabilistic parsing techniques for data classification in a Team or individual.
BCST803A.4	Analyze and evaluate the use of information extraction techniques in NLP using modern tools.
BCST803A.5	Design solution for Environment and Sustainability using appropriate Machine Learning Technical to address real-world problem in NLP in a team work .

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	IV
SUBJECT:	Embedded Systems		BCST-803(B)

COURSE OUTCOMES (CO)	
CO #	CO STATEMENT
BCST803B.1	Apply the concepts and principles to develop a hardware design for embedded systems to solve engineering problem.
BCST803B.2	Design suitable hardware and software solutions as per embedded systems requirements.
BCST803B.3	Implement debug, and test cases related to embedded systems.
BCST803B.4	Investigate as an individual or a team design of an embedded system and submit a report containing their relative merits and demerits based on performance measures.
BCST803B.5	Evaluate the performance and reliability of embedded systems used in a real-world problem.

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	IV
SUBJECT:	Queuing Theory and Modeling		BCST-803(C)

COURSE OUTCOMES (CO)	
CO #	CO STATEMENT
CST-016.1	Apply fundamental concepts of probability to solve complex engineering problem.
CST-016.2	Apply probability distributions functions which can describe real-life phenomena.
CST-016.3	Analyze stochastic processes and phenomena which evolve concerning time in a probabilistic manner and submit report individually or in team
CST-016.4	Evaluate expected values of variables and handling situations involving more than one random variable and functions of random variables.
CST-016.5	Evaluate the basic characteristic features of Markov chains, queuing systems and queuing models and submit report individually or in team.

BRANCH:			2023-24
COURSE:	B.TECH	YEAR:	IV
SUBJECT:	Cloud Security		BCST-803(D)

COURSE OUTCOMES (CO)	
CO #	CO STATEMENT
BCST803D.1	Apply data encryption algorithms to solve real world security privacy problem.
BCST803D.2	Identity management and access controls issues to achieve high degree security and privacy in cloud.
BCST803D.3	Design configuration of security management to minimize data exposure .
BCST803D.4	Analyse dynamic threat intelligence to keep track of the evolving threat landscape.
BCST803D.5	Evaluate organizational recovery from securitydisaster .

BRANCH:			2023-24
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COURSE:	B.TECH	YEAR:	IV	VIII
SUBJECT:	Blockchain			BCST-803(E)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCST803E.1	Apply blockchain techniques to solve complex and real world engineering problem.	
BCST803E.2	Implement smart contracts in Ethereum using different development frameworks.	
BCST803E.3	Investigate Blockchain with AI, IoT and Cyber Security challenge based on real world scenario.	
BCST803E.4	Analyze the incentive structure in a blockchain based system and critically assess its functions, benefits and vulnerabilities.	
BCST803E.5	Evaluate blockchain based structure potential and its its limitations in complex problem..	

BRANCH:		2023-24
COURSE:	B.TECH	YEAR: IV
SUBJECT:	Fault Tolerant Computing	VIII
		BOCS-804(A)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BOCS804A.1	Apply knowledge of software testing and fault tolerant systems.	
BOCS804A.2	Develop an understanding of the issues of reliability and its evaluation in the design of computer systems, and to emphasize	
BOCS804A.3	Analyze the concepts and techniques which can make a system fault tolerant.	
BOCS804A.4	Apply the importance of fault tolerance in the design of safety critical systems.	
BOCS804A.5	Apply testing techniques and algorithms in hardware, software and communications.	

BRANCH:		2023-24
COURSE:	B.TECH	YEAR: IV
SUBJECT:	Artificial Intelligence	VIII
		BOCS-804(B)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BOCS804B.1	Apply knowledge representation,tools, strategies, artificial intelligence learning paradigms and expert systems for solving problem	
BOCS804B.2	Identifying artificial intelligent constraints satisfaction techniques and tools to find solutions of complex problems.	
BOCS804B.3	Analyze the given searching and optimization Techniques.	
BOCS804B.4	Formulate valid solutions for problems involving uncertain inputs or outcomes by using decision making techniques.	
BOCS804B.5	Create a machine learning model to solve real world prediction and classification problems using appropriate AI algorithm and modern tools.	

BRANCH:		2023-24
COURSE:	B.TECH	YEAR: IV
SUBJECT:	Cognitive Radio Networks	VIII
		BOCS-804(C)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BOCS804C.1	Analyze the impact of cognitive radio networks on spectrum utilization and network performance.	
BOCS804C.2	Assess the ethical implications of using cognitive radio networks.	
BOCS804C.3	Design a cognitive radio network for a specific application, such as wireless sensor networks or vehicular communication systems.	
BOCS804C.4	Write a technical report on a recent advance in cognitive radio network technology.	
BOCS804C.5	Develop a research proposal for a new cognitive radio network architecture or algorithm.	

BRANCH:				2023-24
COURSE:	B.TECH	YEAR:	IV	VIII
SUBJECT:	Cognitive Radio Networks			BOCS-804(D)

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BOCS804D.1	Apply Cognitive Radio (CR) and its fundamental concepts to solve the real world engineering problem.	
BOCS804D.2	Evaluate the performance of a CR network in a practical deployment.	
BOCS804D.3	Design Cognitive Radio network for a specific scenario.	
BOCS804D.4	Identify and analyze case studies and real-world applications of CR networks.	
BOCS804D.5	Develop a research proposal for a new cognitive radio network architecture or algorithm.	

BRANCH:				2023-24
COURSE:	B.TECH	YEAR:		
SUBJECT:				

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BOCS804E.1	Apply 3D interaction techniques in practical scenarios using modern and IT tools	
BOCS804E.2	Apply custom software solutions for VR and 3D interfaces	
BOCS804E.3	Analyze the effectiveness of 3D user interfaces for real-world engineering problems	
BOCS804E.4	Evaluate the impact of VR in education, medicine, and other domains to assess societal safety legal and cultural issues	
BOCS804E.5	Create new VR applications tailored to specific industries or educational needs	

BRANCH:				2023-24
COURSE:	B.TECH	YEAR:	IV	VIII
SUBJECT:	Advanced Operating Systems Lab			BCSP-801

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCSP801.1	Apply the concept of virtualization for installing operating system on virtual machine.	
BCSP801.2	Implement shell variables and shell keywords for automated system tasks.	
BCSP801.3	Implement multiple approaches used for the design and development of the operating system.	
BCSP801.4	Analyze the output of Linux commands for files and directories, creating and viewing files, File comparisons and Disk related commands.	
BCSP801.5	Make an effective laboratory report based on experiments performed as per given format.	

BRANCH:				2023-24
COURSE:	B.TECH	YEAR:	IV	VIII
SUBJECT:	Cryptography & Network Security			BCSP-802

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCSP801.1	Understand computer security principles and discuss ethical issues for theft of information. Identify threat models and common computer network security goals	
BCSP801.1	Explain various encryption algorithms, hashing functions, one-way authentication and public key cryptology	
BCSP801.3	Analyze firewalls, DOS attacks and defense types. Dramatize example scenarios in DNS and IPSec applications	

CO-PO-PI Justification

BRANCH:				2023-24
COURSE:	B.TECH	YEAR:	IV	VIII
SUBJECT:	Major Project			BCSP-805

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
BCSP805.1	Identify an open-ended problem in area of computer science & engineering which requires further investigation.	
BCSP805.2	Apply the methods and techniques required for the project work and manage to work as a team member.	
BCSP805.3	Formulate and implement innovative ideas for SDG.	

BCSP805.4	Analyze the results with specified standard to come out with concrete solutions.	
BCSP805.5	Write an effective technical report to developed the ability of presentation and project writing skills.	

BRANCH:	CSE/DATA SCINENCE	2023-24
COURSE:	B.TECH	I
SUBJECT:	Environmnetal Studies	AHT-004

COURSE OUTCOMES (CO)	
CO #	CO STATEMENT
AHT004.1	Apply the fundamental concepts of ecology, ecosystems, and their constituent parts, and assess the significance of conserving biodiversity
AHT004.2	Demonstrate the ideas about the role of an individual / group in the conservation of the environment through effective skills.
AHT004.3	Write arguments regarding the global environmental challenges, their underlying problems, and the ethical codes associated with environmental issues
AHT004.4	Analyze the impacts of pollutions on the environment, human health, and ecosvstems
AHT004.5	Analyze all the natural / energy sources in terms of their environmental consequences and sustainability.

BRANCH:	CSE / Data Science	2023-24
COURSE:	B.TECH	I
SUBJECT:	Engineering Graphics and Design Lab	MEP-002

COURSE OUTCOMES (CO)	
CO #	CO STATEMENT
MEP002.1	Understand the concept of lines, scales, dimensions and engineering drawing formats.
MEP002.2	Understand and visualize different views and projections.
MEP002.3	Able to Design surfaces and solids by applying concepts of isometric and orthographic principles.
MEP002.4	Apply the techniques, skills and modern engineering tools to design a system, component or process to within realistic constraints individually or in group.
MEP002.5	Understand Auto CAD 2-D and 3-D drawing concepts using various commands used in Auto CAD
MEP002.6	Able to communicate effectively through technical drawings under the norms of engineering practice.

BRANCH:	APPLIED SCIENCE/CSE II	2023-24
COURSE:	B.TECH	III
SUBJECT:	Soft Skills	AHT-007

COURSE OUTCOMES (CO)	
CO #	CO STATEMENT
1	Demonstrate the nature and objective of communication required in working place as engineers
2	Construct verbal and nonverbal communication techniques in the professional environment
3	Make use of vocabulary , language and fluency and enhance confidence in face of diverse audience to deliver professional presentation and Group Discussion to show leadership quality.
4	Utilize the techniques of Interview skills / Problem Solving Skills to be ready for the placement .
5	Evaluate efficiency of students possessing positive qualities based on perfomance rubrics.

BRANCH:	CSE / Data Science	2023-24
COURSE:	B.TECH	I
SUBJECT:	Engineering Graphics and Design Lab	MEP-002

COURSE OUTCOMES (CO)	
CO #	CO STATEMENT
MEP002.1	Understand the concept of lines, scales, dimensions and engineering drawing formats.
MEP002.2	Understand and visualize different views and projections.
MEP002.3	Able to Design surfaces and solids by applying concepts of isometric and orthographic principles.
MEP002.4	Apply the techniques, skills and modern engineering tools to design a system, component or process to within realistic constraints individually or in group.
MEP002.5	Understand Auto CAD 2-D and 3-D drawing concepts using various commands used in Auto CAD
MEP002.6	Able to communicate effectively through technical drawings under the norms of engineering practice.

BRANCH:	CSE / Data Science	2023-24
COURSE:	B.TECH	I
SUBJECT:	Engineering Graphics and Design Lab	MEP-002

COURSE OUTCOMES (CO)

CO #	CO STATEMENT	
MEP002.1	Understand the concept of lines, scales, dimensions and engineering drawing formats.	
MEP002.2	Understand and visualize different views and projections.	
MEP002.3	Able to Design surfaces and solids by applying concepts of isometric and orthographic principles.	
MEP002.4	Apply the techniques, skills and modern engineering tools to design a system, component or process to within realistic constraints individually or in group.	
MEP002.5	Understand Auto CAD 2-D and 3-D drawing concepts using various commands used in Auto CAD	
MEP002.6	Able to communicate effectively through technical drawings under the norms of engineering practice.	