

**Department of Computer Science and Engineering (AI&ML)****Program: B.Tech****Regulation: R24****Batch: 2024-2028****Total no of Courses: 52****Course Outcomes**

Semester No:	I B.Tech -I Semester		
Course Title:	Linear Algebra and Calculus	Course Code:	C101
Course Outcome No.	Course Outcome Statement		
C101.1	Develop matrix algebra techniques that are needed by engineers for practical applications.		
C101.2	To find the eigen values and eigen vectors and solve the problems by using linear transformation.		
C101.3	Apply the knowledge of mean value theorems, solve inequality.		
C101.4	Familiarize with functions of several variables which is useful in optimization.		
C101.5	Familiarize with double and triple integrals of functions of several variables in two and three dimensions.		
Semester No:	I B.Tech -I Semester		
Course Title:	Communicative English	Course Code:	C102
Course Outcome No.	Course Outcome Statement		
C102.1	To utilize the text, online resources, and other social, and real time situations with an aim to practice Communicative English.		
C102.2	To apply grammatical knowledge for speaking, and writing purposes		
C102.3	To analyze and practice various devices of speech for effective conversation and presentations.		
C102.4	Appraising the language competence of the learners and suggesting remedial action.		
C102.5	To make the learners practice writing tasks which are relevant for job training and academic purposes.		
Semester No:	I B.Tech -I Semester		
Course Title:	Engineering Physics	Course Code:	C103
Course Outcome No.	Course Outcome Statement		
C103.1	Analyze the intensity variation of light due to interference, diffraction and classify various types of lasers.		
C103.2	Identify various crystal systems and analyze the crystalline structure.		
C103.3	Summarize various types of polarization of dielectrics and classify the magnetic materials.		
C103.4	Explain fundamentals of quantum mechanics and apply to one-dimensional motion of particles.		
C103.5	Outline the properties of charge carriers in semiconductors.		
Semester No:	I B.Tech -I Semester		



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Course Title:	Basic Civil & Mechanical Engineering	Course Code:	C104
Course Outcome No.	Course Outcome Statement		
C104.1	Understand the role of civil engineers in various disciplines, the scope of each discipline, and the materials used in building construction and principles of surveying.		
C104.2	Describe the fundamentals of transportation engineering, water resources, and environmental engineering, including highway pavements, water quality, hydrology, and water storage structures.		
C104.3	Understand and apply different manufacturing processes and engineering materials, including their applications, and basic mechanical design principles.		
C104.4	Explain the basics of thermal engineering, including working principles of engines, power plants, and related thermal cycles, along with their applications.		
C104.5	Describe the working of different mechanical power transmission systems and the basics of robotics and their applications.		
Semester No:	I B.Tech -I Semester		
Course Title:	Problem Solving & Programming with C	Course Code:	C105
Course Outcome No.	Course Outcome Statement		
C105.1	Illustrate the fundamental concepts of computers and basic computer programming and problem-solving approach.		
C105.2	Understand the Control structures, Branching and Looping.		
C105.3	Make use of Arrays and Develop Programs on modular programming using functions and strings.		
C105.4	Demonstrate the ability to write programs using Structures and Unions.		
C105.5	Apply File handling operations.		
Semester No:	I B.Tech -I Semester		
Course Title:	Engineering Physics Lab	Course Code:	C106
Course Outcome No.	Course Outcome Statement		
C106.1	Demonstrate the modern engineering physics techniques and tools in real times applications in engineering studies.		
C106.2	Develop the laboratory skills in handling of electrical and optical instruments.		
C106.3	Conduct experiment independently and in team to record the measurements.		
Semester No:	I B.Tech -I Semester		
Course Title:	Communicative English Lab	Course Code:	C107
Course Outcome No.	Course Outcome Statement		
C107.1	Understand and recognize the various facets of English language ability with a focus on the four basic skills- namely -LSRW abilities.		
C107.2	Implement various activities for language learners to practice communication skills.		
C107.3	To enhance listening and speaking comprehension, analyze the sounds, stress, rhythm, intonation, and syllable division of English speech.		
C107.4	Assess the professionalism of students when taking part in group discussions, debates, JAM sessions, Presentations and Interviews.		



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C107.5	Equipping oneself with Interview Skills and a range of Soft Skills for life and career.		
Semester No:	I B.Tech -I Semester		
Course Title:	Problem Solving & Programming with C Lab	Course Code:	C108
Course Outcome No.	Course Outcome Statement		
C108.1	Read, understand, and trace the execution of programs written in C language.		
C108.2	Select the right control structure for solving the problems .and demonstrate the application of arrays functions and strings		
C108.3	Develop Debug and Execute programs to demonstrate the applications of Pointers, Structures & Unions, and Files.		
Semester No:	I B.Tech -I Semester		
Course Title:	IT Workshop Lab	Course Code:	C109
Course Outcome No.	Course Outcome Statement		
C109.1	Perform Hardware troubleshooting and Perform Hardware troubleshooting		
C109.2	Apply different way of hooking the PC on to the internet from home and Workplace.		
C109.3	Design word documents by learning word processing and Create presentations by using different styles and using AI Tools Chat GPT and GITHUB		
Semester No:	I B.Tech -I Semester		
Course Title:	Health and Wellness, Yoga and Sports	Course Code:	C110
Course Outcome No.	Course Outcome Statement		
C110.1	Understand the importance of yoga and sports for Physical fitness and sound health.		
C110.2	Demonstrate an understanding of health-related fitness components.		
C110.3	Compare and contrast various activities that help enhance their health		
C110.4	Assess current personal fitness levels.		
C110.5	Develop Positive Personality.		
Semester No:	I B.Tech -II Semester		
Course Title:	Differential Equations and Vector Calculus	Course Code:	C111
Course Outcome No.	Course Outcome Statement		
C111.1	Solve the first order differential equations related to various engineering fields.		
C111.2	Model engineering problems as higher order differential equations and solve analytically.		
C111.3	Identify solution methods for partial differential equations that model physical processes.		
C111.4	Interpret the physical meaning of different operators such as gradient, curl and divergence.		
C111.5	Estimate the work done against a field, circulation and flux using vector calculus.		
Semester No:	I B.Tech -II Semester		
Course Title:	Applied Chemistry	Course Code:	C112
Course Outcome No.	Course Outcome Statement		
C112.1	Describe Molecular orbital diagrams.		



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C112.2	Importance of Graphene's. Apply the principle of band diagrams in the applications of Super conductors and semiconductors.		
C112.3	Compare the Materials of Construction for Battery and Electro Chemical Sensors.		
C112.4	Explain the Preparation, Properties and applications of thermos plastics and thermo setting plastics, Elastomers and conducting polymers.		
C112.5	Summarize the concepts of instrumental methods		
Semester No:	I B.Tech -II Semester		
Course Title:	Engineering Graphics	Course Code:	C113
Course Outcome No.	Course Outcome Statement		
C113.1	Understand the basics of Engineering Graphics to construct the polygon, curves, and scales.		
C113.2	Draw the orthographic projections of points and straight lines inclined to both the planes.		
C113.3	Draw the projections of planes in various conditions.		
C113.4	Draw the projections of regular solids, with its axis inclined to one plane and sections of solids.		
C113.5	Visualize the 3D isometric views from 2D orthographic views and vice versa along with basic introduction to CAD.		
Semester No:	I B.Tech -II Semester		
Course Title:	Basic Electrical and Electronics Engineering	Course Code:	C114
Course Outcome No.	Course Outcome Statement		
C114.1	Understand the problem-solving concepts associated to AC and DC circuits		
C114.2	Remember the fundamental laws, construction and operation of AC and DC machines, instruments.		
C114.3	Understand different power generation mechanisms, Electricity billing concept and important safety measures related to electrical operations.		
C114.4	Understand the fundamental principles of electronic devices, analyzing the different rectifying and Amplifying Circuits.		
C114.5	Analyze and design different digital electronic circuits like gates, Sequential and Combinational Circuits.		
Semester No:	I B.Tech -II Semester		
Course Title:	Data Structures through C	Course Code:	C115
Course Outcome No.	Course Outcome Statement		
C115.1	Explain the role of linear data structures in organizing and accessing data efficiently in algorithms		
C115.2	Develop programs using stacks to handle recursive algorithms, manage program states, and solve related problems.		
C115.3	Apply queue-based algorithms for distinguish between dequeues and priority queues, and apply them appropriately to solve data management challenges, and apply Hash based solutions for specific problems.		
C115.4	Design, implement, and apply linked lists for dynamic data storage, demonstrating understanding of memory allocation.		
C115.5	Implement operations on Binary tree, Demonstrate the representation and traversal		



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	techniques of graphs and their applications.		
Semester No:	I B.Tech -II Semester		
Course Title:	Applied Chemistry Lab	Course Code:	C116
Course Outcome No.	Course Outcome Statement		
C116.1	Determine the cell constant and conductance of solutions. Determine redox potentials.		
C116.2	Prepare advanced polymer Bakelite materials. Strength of Mn(II) and Ferrous Iron by dichrometry, Adsorption of acetic acid.		
C116.3	Measure the strength of an acid present in secondary batteries. Calculation of Hardness of Water.		
Semester No:	I B.Tech -II Semester		
Course Title:	Basic Electrical and Electronics Engineering Lab	Course Code:	C117
Course Outcome No.	Course Outcome Statement		
C117.1	Apply the theoretical concepts and operating principles to derive mathematical models for circuits, Electrical machines and measuring instruments; calculations for the measurement of resistance, power and power factor.		
C117.2	Apply the theoretical concepts to obtain calculations for the measurement of resistance, power and power factor and design suitable circuits for measurement of electrical parameters		
C117.3	Plot and discuss the characteristics of various electron devices/instruments.		
Semester No:	I B.Tech -II Semester		
Course Title:	Data Structures through C Lab	Course Code:	C118
Course Outcome No.	Course Outcome Statement		
C118.1	Explain the role of linear data structures in organizing and accessing data efficiently in algorithms.		
C118.2	Develop programs using stacks to handle recursive algorithms, manage program states, and solve related problems& Queues.		
C118.3	Design, implement, and apply linked lists for dynamic data storage, demonstrating understanding of memory allocation, Graphs & Trees.		
Semester No:	I B.Tech -II Semester		
Course Title:	Engineering Workshop	Course Code:	C119
Course Outcome No.	Course Outcome Statement		
C119.1	Identify workshop tools and their operational capabilities. Practice on manufacturing of components using workshop trades including carpentry, fitting, sheet metal.		
C119.2	Practice on manufacturing of components using workshop trades including foundry and welding.		
C119.3	Apply fitting operations in various applications and engineering knowledge for Plumbing, House Wiring Practice, and Making square rod and L-bend from the round rod in black smithy		
Semester No:	I B.Tech -II Semester		
Course Title:	NSS /NCC/ Scouts & Guides / Community Service	Course Code:	C120



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Course Outcome No.	Course Outcome Statement		
C120.1	Explain the objectives of NSS/NCC, community service, career guidance, and personality development activities.		
C120.2	Apply environmental awareness and sustainable practices through nature conservation and community activities.		
C120.3	Analyze community needs and participate in social service, health awareness, and women empowerment programs		
Semester No:	II B.Tech -I Semester		
Course Title:	Mathematical Foundations of Artificial Intelligence	Course Code:	C201
Course Outcome No.	Course Outcome Statement		
C201.1	Explain key concepts such as vector spaces, linear independence, and basis.		
C201.2	Apply matrix operations, including matrix multiplication, inversion, and row reduction.		
C201.3	Describe key graph theory concepts, including vertices, edges, paths, cycles, and connectivity.		
C201.4	Apply graph representations (adjacency matrix and adjacency list) to model realworld problems involving directional relationships		
C201.5	Compute entropy and related measures for various probability distributions and interpret their significance in quantifying uncertainty and information content.		
Semester No:	II B.Tech -I Semester		
Course Title:	Object Oriented Programming using JAVA	Course Code:	C202
Course Outcome No.	Course Outcome Statement		
C202.1	Implement programming object orientated strategies and Contrast classes and objects.		
C202.2	Analyze Inheritance and Dynamic Method Dispatch		
C202.3	Demonstrate various classes in different packages and can design own packages		
C202.4	Manage Exceptions and Apply Threads		
C202.5	Create GUI screens along with event handling and write network programs		
Semester No:	II B.Tech -I Semester		
Course Title:	Fundamentals of Artificial Intelligence and Machine Learning Using Python	Course Code:	C203
Course Outcome No.	Course Outcome Statement		
C203.1	Understand the syntax and semantics, string operations of python programming language		
C203.2	Formulate a problem and build intelligent agents.		
C203.3	Apply appropriate searching techniques to solve a realworld problem		
C203.4	Explain the types of Machine Learning with example application.		
C203.5	Differentiate between descriptive, predictive and prescriptive models with case study.		



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Semester No:	II B.Tech -I Semester		
Course Title:	Computer Networks	Course Code:	C204
Course Outcome No.	Course Outcome Statement		
C204.1	Understand the basic layers and functions its in computer networks.		
C204.2	Demonstrate the performance of a network.		
C204.3	Explain the basics of how data lows from one node to another.		
C204.4	Analyze and design routing algorithms.		
C204.5	Describe the working of various transport and application layer protocols		
Semester No:	II B.Tech -I Semester		
Course Title:	Universal Human Values- Understanding Harmony & Human Ethical Conduct	Course Code:	C205
Course Outcome No.	Course Outcome Statement		
C205.1	Develop an understanding of human values.		
C205.2	Achieve harmony within self and body.		
C205.3	Build trustful and respectful relationships.		
C205.4	Understand harmony in nature.		
C205.5	Practice ethical and value-based living.		
Semester No:	II B.Tech -I Semester		
Course Title:	Object Oriented Programming using JAVA Lab	Course Code:	C206
Course Outcome No.	Course Outcome Statement		
C206.1	Write basic Java programs using arrays, control structures, and demonstrate the use of classes and objects.		
C206.2	Apply object-oriented concepts such as inheritance and packages, and implement applications using built-in and user-defined packages.		
C206.3	Develop Java applications with exception handling, multithreading, graphical user interfaces, and basic networking.		
Semester No:	II B.Tech -I Semester		
Course Title:	Artificial Intelligence and Machine Learning Using Python Lab	Course Code:	C207
Course Outcome No.	Course Outcome Statement		
C207.1	Demonstrate foundational proficiency in Python		
C207.2	Perform basic data manipulation using NumPy and Pandas		
C207.3	Apply machine learning techniques, including the implementation of regression, classification algorithms, and neural networks.		
Semester No:	II B.Tech -I Semester		
Course Title:	Power BI Lab	Course Code:	C208
Course Outcome No.	Course Outcome Statement		
C208.1	Apply end-to-end Power BI skills to connect, transform, and model data from various		



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	sources, and develop interactive reports and dashboards for data-driven decision-making		
C208.2	Utilize Power Query and DAX to perform data transformation, aggregation, filtering, and time intelligence operations, enabling insightful and customized visual analytics.		
C208.3	Deploy and manage reports securely using Power BI Service and Mobile platforms, incorporating features like Row-Level Security (RLS), scheduled refreshes, and responsive mobile views for effective sharing and accessibility.		
Semester No:	II B.Tech -I Semester		
Course Title:	Logical Reasoning and Corporate Skills	Course Code:	C209
Course Outcome No.	Course Outcome Statement		
C209.1	Use their logical thinking and analytical abilities to solve reasoning questions from number analogy and series and letter and coding and decoding based aptitude questions company specific and other competitive tests.		
C209.2	Solve questions related to Blood Relations clock and calendar, etc. From company specific and other competitive tests.		
C209.3	Enforce corporate etiquette, and precise usage of English grammar to enhance their professional communication.		
C209.4	Master negotiation skills and telephone etiquette with emotional intelligence for corporate interactions.		
C209.5	Enhance email writing skills by incorporating vocabulary acquired from storytelling, situational dialogues and reading activities by using various digital tools.		
Semester No:	II B.Tech -I Semester		
Course Title:	Environmental Science	Course Code:	C210
Course Outcome No.	Course Outcome Statement		
C210.1	Explain the importance of environmental studies, natural resources, and sustainable resource utilization.		
C210.2	Apply ecosystem concepts and biodiversity conservation practices to environmental management.		
C210.3	Analyze environmental pollution, waste management, and disaster management techniques.		
C210.4	Analyze environmental issues, climate change, and environmental protection laws for sustainable development.		
C210.5	Evaluate the impact of human population on the environment and recommend sustainable environmental practices.		
Semester No:	II B.Tech -II Semester		
Course Title:	Probability & Statistics	Course Code:	C211
Course Outcome No.	Course Outcome Statement		
C211.1	Acquire knowledge in finding the analysis of the data quantitatively or categorically and various statistical elementary tools		
C211.2	Develop skills in designing mathematical models involving probability, random variables and the critical thinking in the theory of probability and its applications in real life problems.		
C211.3	Apply the theoretical probability distributions like binomial, Poisson, and Normal		



	in the relevant application areas.		
C211.4	Analyze to test various hypotheses included in theory and types of errors for large samples.		
C211.5	Apply the different testing tools like t-test, F test, chi-square test to analyze the relevant real-life problems.		
Semester No:	II B.Tech -II Semester		
Course Title:	Formal Languages and Automata Theory	Course Code:	C212
Course Outcome No.	Course Outcome Statement		
C212.1	Comprehensible to understand the concept of abstract machine and their ability to recognize languages based on their computational power and the types of languages they can process.		
C212.2	Understand regular expressions and finite automata.		
C212.3	Develop context free grammars for formal languages.		
C212.4	Design pushdown automata for context free grammars.		
C212.5	Design Turing machine and Formulate decidability and un-decidability problems and P&NP problems.		
Semester No:	II B.Tech -II Semester		
Course Title:	Natural language Processing and Chatbot	Course Code:	C213
Course Outcome No.	Course Outcome Statement		
C213.1	Explain the concept of NLP Libraries and language modeling		
C213.2	To design an innovative application using NLP components		
C213.3	Exemplify the analysis of word forms		
C213.4	Explain the semantics for language processing		
C213.5	Summarize the approaches for machine translation and applications of NLP.		
Semester No:	II B.Tech -II Semester		
Course Title:	Design and Analysis of Algorithms	Course Code:	C214
Course Outcome No.	Course Outcome Statement		
C214.1	Review the fundamentals of algorithmic problem solving and analyzing efficiency of algorithms.		
C214.2	Apply mathematical formulation, complexity analysis and methodologies.		
C214.3	Compare the time complexities of various algorithms.		
C214.4	Critically analyze the different algorithm design techniques for a given problem.		
C214.5	Illustrate NP class problems and formulate solutions using standard approach.		
Semester No:	II B.Tech -II Semester		
Course Title:	Database Management Systems	Course Code:	C215
Course Outcome No.	Course Outcome Statement		
C215.1	Understand basic concepts of database systems and data models.		



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C215.2	Design ER diagrams and apply conceptual modeling for real world problems like Railway & Hospital systems.		
C215.3	Apply relational model concepts and SQL operations to implement simple databases.		
C215.4	Perform schema refinement using normalization techniques.		
C215.5	Explain transaction management concepts and implement concurrency control and recovery methods. Understand indexing techniques like B+ Trees and Hash-based indexing for efficient data retrieval.		
Semester No:	II B.Tech -II Semester		
Course Title:	Natural language Processing and Chatbot Lab	Course Code:	C216
Course Outcome No.	Course Outcome Statement		
C216.1	Demonstrate a clear understanding of basic NLP concepts, techniques, and challenges, and articulate the applications of NLP in various domains.		
C216.2	Design, implement, and deploy functional chatbots using Python and popular frameworks, incorporating features such as context management, sentiment analysis, and user personalization.		
C216.3	Implement machine learning algorithms for various NLP tasks (such as text classification and named entity recognition) and apply model evaluation techniques to refine performance through tuning and optimization.		
Semester No:	II B.Tech -II Semester		
Course Title:	Design and Analysis of Algorithms Lab	Course Code:	C217
Course Outcome No.	Course Outcome Statement		
C217.1	Understand of algorithm design techniques applicable across various tasks and ensuring foundational knowledge in problem solving.		
C217.2	Implement of the algorithms in both sequential and parallel paradigms, relevant for weeks involving sorting and graph traversals.		
C217.3	Handle real-world computational problems.		
Semester No:	II B.Tech -II Semester		
Course Title:	Database Management Systems Lab	Course Code:	C218
Course Outcome No.	Course Outcome Statement		
C218.1	Utilizing Data Definition Language (DDL), Data Manipulation Language (DML), and Data Control Language (DCL) commands effectively within a database environment.		
C218.2	Constructing and execute queries to manipulate and retrieve data from databases.		
C218.3	Develop application programs using PL/SQL. Establish database connectivity through JDBC (Java Database Connectivity).		
Semester No:	II B.Tech -II Semester		
Course Title:	Full Stack Development	Course Code:	C219
Course Outcome No.	Course Outcome Statement		
C219.1	Implement the client side of the web application.		
C219.2	Deploy server-side applications using NodeJS. Use express framework in web development.		
C219.3	Implement and architect database systems. Develop a full stack single page application.		



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Semester No:	II B.Tech -II Semester		
Course Title:	Numerical Ability & Professional Communication skills	Course Code:	C220
Course Outcome No.	Course Outcome Statement		
C220.1	Use their logical thinking and analytical abilities to solve Quantitative aptitude questions from company specific and other competitive tests.		
C220.2	Solve questions related to time and distance and time and work etc. from company specific and other competitive tests.		
C220.3	Comprehend the essentiality of LSRW skills in paper presentations, seminars, workshops, conferences etc. with teams and to solve different types of questions based on vocabulary, structure, grammar and verbal reasoning.		
C220.4	Attain the knowledge of soft skills in various conditions, Solve questions based on sentence completion and fill in the blanks.		
C220.5	Explore diverse fields through English, to solve different types of questions based on vocabulary, structure, grammar and verbal reasoning.		
Semester No:	II B.Tech -II Semester		
Course Title:	Intellectual Property Rights	Course Code:	C221
Course Outcome No.	Course Outcome Statement		
C221.1	Understand the Fundamentals of IPR		
C221.2	Analyze Legal Aspects of Patents and Copyrights.		
C221.3	Evaluate Trademarks and Industrial Design Protection.		
C221.4	Examine the Significance of GIs and Trade Secrets.		
C221.5	Apply IPR Laws and Address Emerging Challenges.		
Semester No:	III B.Tech -I Semester		
Course Title:	Compiler Design	Course Code:	C301
Course Outcome No.	Course Outcome Statement		
C301.1	Understand the basics of language processing and implement lexical analyzer for any language		
C301.2	Describe the different types of parsing and implement parser for any language		
C301.3	Explain the different intermediate code representations and use Syntax directed		
C301.4	Apply the basics of data flow analysis, optimizations, and run time environment required for handling recursive procedures		
C301.5	Apply machine-independent and machine-dependent code optimization techniques, dataflow analysis, and target code generation methods to improve the efficiency of compiled programs.		
Semester No:	III B.Tech -I Semester		
Course Title:	Deep Learning	Course Code:	C302
Course Outcome No.	Course Outcome Statement		
C302.1	Understand the concepts of Artificial Intelligence, Machine Learning, and Deep Learning.		
C302.2	Apply language modeling and tokenization techniques for NLP tasks.		



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C302.3	Implement training and finetuning strategies for large language models.		
C302.4	Analyze scaling techniques, benchmarking methods, and optimization strategies.		
C302.5	Evaluate modern LLM architectures and recent advancements in Generative AI.		
Semester No:	III B.Tech -I Semester		
Course Title:	Introduction to Generative AI	Course Code:	C303
Course Outcome No.	Course Outcome Statement		
C303.1	Understand the evolution of AI and the significance of Deep Learning		
C303.2	Apply various Neural Network architectures for tasks like image recognition and sequence modeling.		
C303.3	Analyze data preprocessing and training techniques for neural networks. .		
C303.4	Apply the generative AI tools for different applications related to Automation and Robotics		
C303.5	Design practical solutions using advanced neural networks for diverse applications		
Semester No:	III B.Tech -I Semester		
Course Title:	Software Engineering	Course Code:	C304
Course Outcome No.	Course Outcome Statement		
C304.1	Understand the fundamentals of software engineering, including the evolving role of software, process models, and software myths.		
C304.2	Explain software process frameworks, layered technology, and maturity models such as CMMI.		
C304.3	Compare and apply software development process models like Waterfall, Spiral, and Agile methodologies.		
C304.4	Identify, analyze, and classify software requirements including functional and nonfunctional requirements.		
C304.5	Develop Software Requirement Specification (SRS) documents and interface specifications.		
Semester No:	III B.Tech -I Semester		
Course Title:	Internet Of Things	Course Code:	C305
Course Outcome No.	Course Outcome Statement		
C305.1	Explain IoT fundamentals, architecture, devices, and computing paradigms.		
C305.2	Apply IoT communication technologies, protocols, and security mechanisms.		
C305.3	Develop IoT applications using platforms and sensor-to-cloud connectivity.		
C305.4	Analyze IoT data, cloud services, machine learning, and visualization techniques.		
C305.5	Analyze IoT applications and emerging technologies in real-world scenarios.		
Semester No:	III B.Tech -I Semester		
Course Title:	Deep Learning Lab	Course Code:	C306
Course Outcome No.	Course Outcome Statement		
C306.1	Apply Deep Learning fundamentals, neural network concepts, and Python-based frameworks such as TensorFlow, Keras, and PyTorch for intelligent application development.		
C306.2	Design and implement deep learning models including Perceptron, FFNN, MLP, CNN, and optimization techniques for image classification and prediction tasks.		



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C306.3	Develop advanced deep learning applications using RNN, LSTM, Transfer Learning, Autoencoders, and GANs for real-world problems in computer vision and Natural Language Processing.		
Semester No:	III B.Tech -I Semester		
Course Title:	Generative AI Lab	Course Code:	C307
Course Outcome No.	Course Outcome Statement		
C307.1	Develop the ability to explore and analyze word embeddings, perform vector arithmetic to investigate word relationships, visualize embeddings using dimensionality reduction techniques		
C307.2	Apply prompt engineering skills to real-world scenarios, such as information retrieval, text generation		
C307.3	Utilize pre-trained Hugging Face models for real-world applications, including sentiment analysis and text summarization.		
Semester No:	III B.Tech -I Semester		
Course Title:	Advanced Coding using C & JAVA Lab	Course Code:	C308
Course Outcome No.	Course Outcome Statement		
C308.1	Apply logical techniques such as pattern recognition, sequencing, and classification to solve problems.		
C308.2	Implement and manage linear and nonlinear data structures (like stacks, queues, linked lists, trees, and graphs).		
C308.3	Solve complex real-world problems using object-oriented programming concepts in Java.		
Semester No:	III B.Tech -I Semester		
Course Title:	Full Stack Development with Python Lab	Course Code:	C309
Course Outcome No.	Course Outcome Statement		
C309.1	Develop responsive and interactive web pages using HTML, CSS, Java Script, and Bootstrap technologies		
C309.2	Apply Python programming concepts and Flask framework for developing server-side applications		
C309.3	Design and implement database-driven web applications using SQL and CRUD operations.		
Semester No:	III B.Tech -I Semester		
Course Title:	Quantitative Aptitude & Effectual Communication Skills	Course Code:	C310
Course Outcome No.	Course Outcome Statement		
C310.1	Solve advanced problems in Mensuration, Statistics, and Pure Math.		
C310.2	Analyze data and estimate probabilities for decision making.		
C310.3	Communicate effectively through verbal, non-verbal, and written modes.		
C310.4	Apply self-awareness and EQ to manage time, stress, and goals.		
C310.5	Demonstrate interpersonal skills, leadership, and team collaboration.		



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Semester No:	III B.Tech -I Semester		
Course Title:	Evaluation of Community Service Project	Course Code:	C311
Course Outcome No.	Course Outcome Statement		
C311.1	Identify local socio-economic problems and survey community resources.		
C311.2	Design and execute action plans to solve specific, real-world problems.		
C311.3	Measure project results and understand the value of civic engagement		

HOD-CSE (AI&ML)