



LIST OF COURSE OUTCOMES (COs) R – 20 Regulation

List of Course of II B.Tech I Semester

Code	II Year – I SEMESTER
C2101	Mathematics III
C2102	Object Oriented Programming through C++
C2103	Operating Systems
C2104	Software Engineering
C2105	Mathematical Foundations of Computer Science
C2106	Object Oriented Programming through C++ Lab
C2107	Operating Systems Lab
C2108	Software Engineering Lab
C2109	Skill oriented Course – I (Web Application Development Using Full Stack - Frontend Development)
C2110	Constitution of India

List of Course Outcomes of II B. Tech I Semester

Course Name	Mathematics III	Regulation	R – 20
Course Outcome	Statement		
C2101.1	Interpret the physical meaning of different operators such as gradient , curl and divergence.		
C2101.2	Estimate the work done against a field ,circulation and flux using vector calculus		
C2101.3	Apply the laplace transform for solving differential equations		
C2101.4	Find or compute the fourier series of periodic signals		
C2101.5	Know and be able to apply integral expressions for the forwards and inverse fourier transform to a range of non-periodic waveforms		
C2101.6	Identify solution methods for partial differential equations that model physical processes.		

Course Name	Object Oriented Programming through C++	Regulation	R – 20
Course Outcome	Statement		
C2102.1	Summarize OOPs concepts		
C2102.2	Describe constructors & destructors		
C2102.3	Explain inheritance ,overloading ,abstract classes		
C2102.4	Use pointers & concept of polymorphism in programming		
C2102.5	Demonstrate different methods for traversing trees		
C2102.6	Solve the problem using Exception handling.		

Course Name	Operating Systems	Regulation	R – 20
Course Outcome	Statement		
C2103.1	Describe various generations of operating system and functions of operating system		
C2103.2	Describe the concept of program, process the thread		
C2103.3	Analyze various CPU scheduling algorithms and compare their performance		
C2103.4	Solve inter process communication problems using mathematical equations by various methods		
C2103.5	Compare various memory management schemes especially paging and segmentation in operating system and apply various page replacement techniques.		
C2103.6	Outline file systems in operating systems like UNIX/LINUX and windows		

Course Name	Software Engineering	Regulation	R – 20
Course Outcome	Statement		
C2104.1	Understand software engineering principles involved in building large software programs and process of requirements specification and requirements validation		
C2104.2	Understand the concepts of agility and the cost of change and development of use cases ,building the requirement model		
C2104.3	Analyze requirements analysis and system models for designing patterns		
C2104.4	Skills to design, implement, and execute test cases at the unit and integration level		
C2104.5	Evaluate the importance of software maintenance and complexities involved in software evolution		
C2104.6	Apply estimation techniques, schedule project activities and compute pricing and compare conventional and agile software methods		

Course Name	Mathematical Foundations of Computer Science	Regulation	R – 20
Course Outcome	Statement		
C2105.1	Demonstrate skills in solving mathematical problems		
C2105.2	Comprehend mathematical principles and logic		
C2105.3	Demonstrate knowledge of mathematical modeling and proficiency in using mathematical software		
C2105.4	Apply Fermats and Eulers theorem.		
C2105.5	Manipulate and analyze data numerically and/or graphically using appropriate Software		
C2105.6	Communicate effectively mathematical ideas/results verbally or in writing		

Course Name	Object Oriented Programming through C++ Lab	Regulation	R – 20
Course Outcome	Statement		
C2106.1	Apply the various OOPs concepts with the help of programs.		
C2106.2	Classify object oriented programming and procedural programming		
C2106.3	Apply C++ features such as composition of objects, operator overloads, dynamic memory allocation, inheritance and polymorphism, file I/O, exception handling		
C2106.4	Define C++ classes using appropriate encapsulation and design principles		
C2106.5	Compare object oriented or non-object oriented techniques to solve bigger computing problems		
C2106.6	Design object oriented programming and procedural programming		

Course Name	Operating Systems Lab	Regulation	R – 20
Course Outcome	Statement		
C2107.1	To use unix utilities and perform basic shell control of the utilities		
C2107.2	To use the unix file system		
C2107.3	To use file access control		
C2107.4	To use of an operating system to develop software		
C2107.5	Students will be able to use Linux environment efficiently		
C2107.6	Solve problems using bash for shell scripting		

Course Name	Software Engineering Lab	Regulation	R – 20
Course Outcome	Statement		
C2108.1	By the end of this lab the student is able to elicit.		
C2108.2	Analyze and specify software		
C2108.3	Requirements through a productive working relationship with various stakeholders of the project prepare SRS document, design document, test cases and software configuration		
C2108.4	Management and risk management related document. develop function oriented and object oriented software design using tools like rational rose.		
C2108.5	Use modern engineering tools necessary for software project management		
C2108.6	Estimations, time management and software reuse generate test cases for software testing		

Course Name	Skill oriented Course – I (Web Application Development Using Full Stack -Frontend Development)	Regulation	R – 20
Course Outcome	Statement		
C2109.1	Analyze a web page and identify its elements and attributes		
C2109.2	Demonstrate the important HTML tags for designing static pages		
C2109.3	Demonstrate separate design from content using cascading style sheet		
C2109.4	Implement MVC and responsive design to scale well across pc		
C2109.5	Implement tablet and mobile phone		
C2109.6	Create web pages using HTML and cascading style sheets.		

Course Name	Constitution of India	Regulation	R – 20
Course Outcome	Statement		
C2110.1	Understand historical background of the constitution making and its importance for building a democratic India		
C2110.2	Understand the functioning of three wings of the government i.e., executive ,legislative and judiciary.		
C2110.3	Understand the value of the fundamental rights and duties for becoming a good citizen of India		
C2110.4	Analyze the decentralization of power between central, state and local self-government.		
C2110.5	Apply the knowledge in strengthening of the constitution like CAG		
C2110.6	Apply Election commission and UPSC for sustaining democracy.		

List of Course of II B.Tech II Semester

Code	II Year – II SEMESTER
C2201	Probability and Statistics
C2202	Database Management Systems
C2203	Formal Languages and Automata Theory
C2204	Java Programming
C2205	Managerial Economics and Financial Accountancy
C2206	Database Management Systems Lab
C2207	R Programming Lab
C2208	Java Programming Lab
C2209	Skill Oriented Course – II (Web Application Development Using Full Stack - Frontend Development –Module-II)

List of Course Outcomes of II B. Tech II Semester

Course Name	Probability and Statistics	Regulation	R – 20
Course Outcome	Statement		
C2201.1	Classify the concepts of data science and its importance		
C2201.2	Interpret the association of characteristics and through correlation and regression tools		
C2201.3	Make use of the concepts of probability and their applications		
C2201.4	Apply discrete and continuous probability distribution		
C2201.5	Design the components of a classical hypothesis test		
C2201.6	Infer the statistical inferential methods based on small and large sampling tests		

Course Name	Database Management Systems	Regulation	R – 20
Course Outcome	Statement		
C2202.1	Determine the basic concepts and applications of database systems		
C2202.2	Describe data models and schemas in DBMS		
C2202.3	Understand the relational database systems using relational operators in Queries		
C2202.4	Use SQL standard language queries on database		
C2202.5	Analyze the functional dependencies and design of the database		
C2202.6	Design of managing the data such as efficiency ,privacy ,security, ethical responsibility.		

Course Name	Formal Languages and Automata Theory	Regulation	R – 20
Course Outcome	Statement		
C2203.1	Classify machines by their power to recognize languages		
C2203.2	Summarize language classes		
C2203.3	Summarize grammars relationship among them with the help of Chomsky hierarchy		
C2203.4	Employ finite state machines to solve problems in computing		
C2203.5	Illustrate deterministic and nondeterministic machines		
C2203.6	Quote the hierarchy of problems arising in the computer science		

Course Name	Java Programming	Regulation	R – 20
Course Outcome	Statement		
C2204.1	Able to realize the concept of object oriented programming & java programming constructs.		
C2204.2	Able to describe the basic concepts of java such as operators ,classes, objects.		
C2204.3	Able to describe the basic concepts of java such as inheritance ,packages, enumeration and various keywords		
C2204.4	Apply the concepts of exception handling and Input/Output operations		
C2204.5	Able to design the applications of Java & Java applet		
C2204.6	Able to analyze & design the concept of Event handling and abstract window toolkit		

Course Name	Managerial Economics and Financial Accountancy	Regulation	R – 20
Course Outcome	Statement		
C2205.1	The learner is equipped with the knowledge of estimating the demand and demand elasticities for a product		
C2205.2	The knowledge of understanding of the input-output –cost relationships and estimation of the least cost combination of inputs		
C2205.3	The pupil is also ready to understand the nature of different markets		
C2205.4	The pupil is also ready to understand the price output determination under various market conditions and also to have the knowledge of different business units		
C2205.5	The learner is able to prepare financial statements and the usage of various accounting tools for analysis		
C2205.6	The learner can able to evaluate various investment project proposals with the help of capital budgeting techniques for decision making		

Course Name	Database Management Systems Lab	Regulation	R – 20
Course Outcome	Statement		
C2206.1	Utilize SQL to execute queries for creating database and performing data manipulation operations		
C2206.2	Apply integrity constraints to build efficient databases		
C2206.3	Apply Queries using Advanced Concepts of SQL		
C2206.4	Build PL/SQL programs including stored procedures, functions		
C2206.5	Build PL/SQL Programs cursors and triggers		
C2206.6	Design Forms and Report		

Course Name	R Programming Lab	Regulation	R – 20
Course Outcome	Statement		
C2207.1	Apply control structures and operators for writing basic python programs..		
C2207.2	List various python data structure concepts and apply them to solve real world problems.		
C2207.3	Develop functions and examine various file handling techniques and apply them to solve real world problems.		
C2207.4	Build simple Modules used for solving real world Problems.		
C2207.5	Analyze object oriented concepts in python.		
C2207.6	Develop, test various GUI application		

Course Name	Java Programming Lab	Regulation	R – 20
Course Outcome	Statement		
C2208.1	Apply control structures and operators for writing basic python programs..		
C2208.2	List various python data structure concepts and apply them to solve real world problems.		
C2208.3	Develop functions and examine various file handling techniques and apply them to solve real world problems.		
C2208.4	Build simple Modules used for solving real world Problems.		
C2208.5	Analyze object oriented concepts in python.		
C2208.6	Develop, test various GUI application		

Course Name	Skill Oriented Course – II (Web Application Development Using Full Stack -Frontend Development –Module-II)	Regulation	R – 20
Course Outcome	Statement		
C2209.1	Develop of the major Web application tier-client side development		
C2209.2	Participate in the active development of cross- browser applications through java script		
C2209.3	Develop java script applications that transition between states		
C2209.4	Apply the concepts of exception handling and Input/output operations		
C2209.5	Able to design the applications of Java & Java applet		
C2209.6	Able to analyze & design the concept of Event handling and abstract window toolkit		

List of Course of III B. Tech I Semester

Code	III Year – I SEMESTER
C3101	Computer Networks
C3102	Design and Analysis of Algorithms
C3103	Data Warehousing and Data Mining
C3104	Operations Research (Job oriented course)
C3105	Software Project Management
C3106	Data Warehousing and Data Mining Lab
C3107	Computer Networks Lab
C3108	Skill Oriented Course – III
C3109	Employability Skills -I
C3110	Summer Internship (Mandatory)

List of Course Outcomes of III B. Tech I Semester

Course Name	Computer Networks	Regulation	R – 20
Course Outcome	Statement		
C3102.1	Illustrate the OSI and TCP/IP reference model		
C3102.2	Analyze MAC layer protocols and LAN technologies		
C3102.3	Design applications using internet protocols		
C3102.4	Implement routing and congestion control algorithms		
C3102.5	Develop Application layer Protocols		
C3102.6	Analyze World Wide Web & Firewalls		

Course Name	Design and Analysis of Algorithms	Regulation	R – 20
Course Outcome	Statement		
C3103.1	Able to Argue the correctness of algorithms using inductive proofs and Analyze worst-case running times of algorithms using asymptotic analysis		
C3103.2	Able to explain important algorithmic design paradigms (divide-and-conquer, greedy method, dynamic-programming and Backtracking) and apply When an algorithmic design situation calls for it.		
C3103.3	Able to Explain the major graph algorithms and employ graphs to model engineering problems, when appropriate.		
C3103.4	Able to Compare between different data structures and pick an appropriate data structure for a design situation.		
C3103.5	Able to Describe the classes P, NP, and NP-Complete and be able to prove that a certain problem is NP-Complete.		
C3103.6	Able to analyze String matching algorithms.		

Course Name	Data Warehousing and Data Mining	Regulation	R – 20
Course Outcome	Statement		
C3104.1	Understand the various functionalities of data warehouse and plan business analysis with OLAP tools.		
C3104.2	Apply suitable pre-processing and visualization techniques for data analysis.		
C3104.3	Analyse various mining and visualization techniques for data analysis.		
C3104.4	Compare various classification techniques for data analysis.		
C3104.5	Compare various clustering techniques for data analysis.		
C3104.6	Apply suitable clustering algorithm for the given data.		

Course Name	Operations Research (Job oriented course)	Regulation	R – 20
Course Outcome	Statement		
C3105.1	State and formulate the optimization problem ,without and with constraints, by using design variables from an engineering design problem		
C3105.2	Apply classical optimization techniques to minimize or maximize a multi-variable objective function ,without or with constraints, and arrive at an optimal solution		
C3105.3	Apply and solve transportation and assignment problem by using linear programming simplex method		
C3105.4	Apply gradient and non-gradient methods to non-linear optimization problems and use interior or exterior penalty functions for the constraints to derive the optimal solutions.		
C3105.5	Formulate and apply dynamic programming technique to inventory control ,production plan, engineering design problem etc		
C3105.6	Formulate and apply to reach a final optimal solution from the current optimal solution		

Course Name	Software Project Management	Regulation	R – 20
Course Outcome	Statement		
C3106.1	Apply the process to be followed in the software development life-cycle models.		
C3106.2	Apply the concepts of project management & planning.		
C3106.3	Implement the project plans through managing people, communications and change		
C3106.4	Conduct activities necessary to successfully complete and close the Software projects		
C3106.5	Implement communication, modeling		
C3106.6	Construction & deployment practices in software development.		

Course Name	Data Warehousing and Data Mining Lab	Regulation	R – 20
Course Outcome	Statement		
C3107.1	Apply preprocessing techniques on real world datasets		
C3107.2	Identify Association rules for any real-world dataset using Apriori algorithm		
C3107.3	Build classification models using j48, id3, naïve Bayes algorithms		
C3107.4	Build classification models using naïve bayes algorithm		
C3107.5	Apply simple k-means clustering algorithm on any data set.		
C3107.6	.		

Course Name	Computer Networks Lab	Regulation	R – 20
Course Outcome	Statement		
C3108.1	Understand the mathematical basics quickly and covers each and every condition of data mining in order to prepare for real-world problems		
C3108.2	Extend the functionality of R by using add-on packages		
C3108.3	Examine data from files and other sources and perform various data manipulation tasks on them		
C3108.4	Code statistical functions in R		
C3108.5	Use R Graphics and Tables to visualize results of various statistical operations on data		
C3108.6	Apply the knowledge of R gained to data Analytics for real life applications		

Course Name	Skill Oriented Course – III	Regulation	R – 20
Course Outcome	Statement		
C3109.1	Recite the corporate etiquette.		
C3109.2	Make presentations effectively with appropriate body language		
C3109.3	Be composed with positive attitude		
C3109.4	Apply their core competencies to succeed in professional and personal life		

Course Name	Employability Skills -I	Regulation	R – 20
Course Outcome	Statement		
C3109.1	Understand the corporate etiquette		
C3109.2	Make presentations effectively with appropriate body language		
C3109.3	Be composed with positive attitude		
C3109.4	Understand the core competencies to succeed in professional and personal life.		

List of Course of III B.Tech II Semester

Code	III Year – II SEMESTER
C3201	Machine Learning
C3202	Compiler Design
C3203	Cryptography and Network Security
C3204	Object Oriented Analysis and Design
C3205	Open Elective-II (IOT)
C3206	Machine Learning using Python Lab
C3207	Compiler Design Lab
C3208	Cryptography and Network Security Lab
C3209	Skill Oriented Course - IV
C3210	Employability skills-II

List of Course Outcomes of III B. Tech II Semester

Course Name	Machine Learning	Regulation	R – 20
Course Outcome	Statement		
C3201.1	Recognize the characteristics of machine learning that make it useful to real-world Problems		
C3201.2	Examine the machine learning algorithms as supervised, semi-supervised and unsupervised.		
C3201.3	Examine the few machine learning tool boxes		
C3201.4	Analyze to use support vector machines		
C3201.5	Analyze to use regularized regression algorithms		
C3201.6	Choose the concept behind neural networks for learning non-learning functions		

Course Name	Compiler Design	Regulation	R – 20
Course Outcome	Statement		
C3202.1	Understand the system software such as assemblers and microprocessors.		
C3202.2	Understand the system software's such as assemblers and loaders.		
C3202.3	Develop top down and bottom up parsers.		
C3202.4	Understand the usage of lex and yacc tools.		
C3202.5	Understand SDD, SDT, intermediate code generation and machine code generation.		
C3202.6	Analyze the performance of the various page replacement algorithms.		

Course Name	Cryptography and Network Security	Regulation	R – 20
Course Outcome	Statement		
C3203.1	Describe the basic principles of Network Security.		
C3203.2	Classify the Symmetric Encryption Techniques		
C3203.3	Apply the public key cryptographic techniques to encrypt the data.		
C3203.4	Evaluate the authentication and hash algorithms.		
C3203.5	Analyze how PGP & S/MIME is used to protect the messages		
C3203.6	Illustrate the requirements for web security and implementing security through SSL/TLS		

Course Name	Object Oriented Analysis and Design	Regulation	R – 20
Course Outcome	Statement		
C3204.1	Analyze the nature of complex system and its solutions.		
C3204.2	Illustrate & relate the conceptual model of the UML, identify & design the classes and relationships		
C3204.3	Analyze & Design Class and Object Diagrams that represent Static Aspects of a Software System.		
C3204.4	Apply basic and Advanced Structural Modeling Concepts for designing real time applications.		
C3204.5	Analyze & Design behavioral aspects of a Software System using Use Case, Interaction and Activity Diagrams		
C3204.6	Analyze & Apply techniques of State Chart Diagrams and Implementation Diagrams to model behavioral aspects and Runtime environment of Software Systems.		

Course Name	Open Elective-II (IOT)	Regulation	R – 20
Course Outcome	Statement		
C3205.1	Understand internet of things and its hardware and software components.		
C3205.2	Identify sensor technologies for sensing real world entities and understand the role of IOT in various domains of industry.		
C3205.3	Illustrate the smart objects and the technologies to connect them to network		
C3205.4	Determine remotely monitor data and control devices		
C3205.5	Define interface I/O devices, sensors and communication modules.		
C3205.6	Design real time IOT based applications.		

Course Name	Machine Learning using Python Lab	Regulation	R – 20
Course Outcome	Statement		
C3206.1	Describe the implementation procedures for the Machine Learning algorithms.		
C3206.2	Apply appropriate data sets to the Machine Learning algorithms.		
C3206.3	Use Machine Learning algorithms to solve real-world problems.		
C3206.4	Outline predictions using machine learning algorithms.		
C3206.5	Design Java programs for various Machine Learning algorithms.		
C3206.6	Design Python programs for various Machine Learning algorithm		

Course Name	Compiler Design Lab	Regulation	R – 20
Course Outcome	Statement		
C3207.1	Design and develop interactive and dynamic web applications using HTML, CSS, JavaScript and XML		
C3207.2	Apply client-server principles to develop scalable and enterprise web applications.		
C3207.3	Apply client-server principles to enterprise web applications.		
C3207.4	Design, develop, and implement a compiler for any language.		
C3207.5	Use lex and yacc tools for developing a scanner and a parser.		
C3207.6	Design and implement LL and LR parsers.		

Course Name	Cryptography and Network Security Lab	Regulation	R – 20
Course Outcome	Statement		
C3208.1	Identify and classify computer and security threats		
C3208.2	Identify and develop a security model to prevent, detect and recover from attacks.		
C3208.3	Encryption and analyze the various symmetric encryption algorithms		
C3208.4	Encryption and analyze the various asymmetric algorithms		
C3208.5	Apply modern algebra and number theory to understanding of cryptographic algorithms and vulnerabilities.		
C3208.6	Identify the various kinds of malicious software and their related threats.		

Course Name	Skill Oriented Course - IV	Regulation	R – 20
Course Outcome	Statement		
C3208.1	Develop professional web pages of an application using HTML elements like lists, navigations, tables, various form elements		
C3208.2	Develop embedded media which includes images, audio, video and CSS Styles		
C3208.3	Utilize JavaScript for developing interactive HTML web pages and validate form data.		
C3208.4	Build a basic web server using Node.js and also working with Node Package Manager (NPM).		
C3208.5	Build a web server using Express.js		
C3208.6	Make use of Typescript to optimize JavaScript code by using the concept of strict type checking.		

Course Name	Employability skills-II	Regulation	R – 20
Course Outcome	Statement		
C3208.1	Recite the corporate etiquette.		
C3208.2	Make presentations effectively with appropriate body language		
C3208.3	Be composed with positive attitude		
C3208.4	Apply their core competencies to succeed in professional and personal life		

List of Course of IV B.Tech I Semester

Code	IV Year – I SEMESTER
C4101	Cyber Security & Forensics
C4102	Deep Learning Techniques
C4103	Block-Chain Technologies
C4104	Open Elective-III (DIGITOL LOGIC DESIGN)
C4105	Open Elective-IV (ENVIRONMETAL MANAGEMENT)
C4106	Universal Human Values 2: Understanding Harmony
C4107	PYTHON: Deep Learning lab
C4108	Industrial/Research Internship (Mandatory)

List of Course Outcomes of IV B. Tech I Semester

Course Name	Cyber Security & Forensics	Regulation	R – 20
Course Outcome	Statement		
C4106.1	Enumerate the computer forensics fundamentals		
C4106.2	Describe the types of computer forensics technology		
C4106.3	Analyze various computer forensics systems		
C4106.4	Illustrate the methods for data recovery, evidence collection		
C4106.5	Illustrate the methods for data seizure		
C4106.6	Identify the Role of CERT-In Security		

Course Name	Deep Learning Techniques	Regulation	R – 20
Course Outcome	Statement		
C4102.1	Demonstrate the fundamental concepts learning techniques of Artificial Intelligence		
C4102.2	Demonstrate the fundamental concepts learning techniques of Machine Learning and Deep Learning.		
C4102.3	Discuss the Neural Network training, various random models.		
C4102.4	Explain the Techniques of Keras, TensorFlow, Theano and CNTK		
C4102.5	Classify the Concepts of CNN and RNN		
C4102.6	Implement Interactive Applications of Deep Learning		

Course Name	Block-Chain Technologies	Regulation	R – 20
Course Outcome	Statement		
C4103.1	Demonstrate the block chain basics, Crypto currency		
C4103.2	To compare and contrast the use of different private vs. public block chain and use cases		
C4103.3	Design an innovative Bit coin Block chain and scripts, Block chain Science on varies coins		
C4103.4	Classify Permission Block chain and use cases – Hyper ledger, Corda		
C4103.5	Make Use of Block-chain in E-Governance, Land Registration		

C4103.6	Make Use of Medical Information Systems and others
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Course Name	Open Elective-III (DIGITOL LOGIC DESIGN)	Regulation	R – 20
Course Outcome	Statement		
C4104.1	Understand the concepts of MOS Design.		
C4104.2	Design and analysis of Combinational and Sequential MOS Circuits.		
C4104.3	Extend the Digital IC Design to Different Applications		
C4104.4	Understand the Concepts of Semiconductor Memories		
C4104.5	Understand the Concepts of Flash Memory		
C4104.6	Understand the Concepts of RAM array organization		

Course Name	Open Elective-IV (ENVIRONMETAL MANAGEMENT)	Regulation	R – 20
Course Outcome	Statement		
C4105.1	Plan and design the water and wastewater systems		
C4105.2	Identify the source of emissions and select proper control systems		
C4105.3	Design & estimation of water supply system for a city		
C4105.4	Get knowledge about various environmental aspects		
C4105.5	Selection of suitable treatment flow for raw water treatments		
C4105.6	Design & estimation of water supply system for a city		

Course Name	Universal Human Values 2: Understanding Harmony	Regulation	R – 20
Course Outcome	Statement		
C4106.1	Students are expected to become more aware of themselves ,and their surroundings(family, society ,nature)		
C4106.2	They would become more responsible in life ,and in handling problems with sustainable solutions ,while keeping human relationships and human nature in mind.		
C4106.3	They would have better critical ability		
C4106.4	They would also become sensitive to their commitment towards what they have understood(human values, human relationship and human society)		
C4106.5	It is hoped that they would be able to apply what they have learnt to their own self in different day-to-day settings in real life ,atleast a beginning would be made in this direction		
C4106.6	This is only introductory foundational input.it would be desirable to follow it up by a) faculty-student or mentor-mentee programs throughout their time with the institution b)Higher level courses on human values in every aspect of living.E.G as a professional		

Course Name	PYTHON: Deep Learning lab	Regulation	R – 20
Course Outcome	Statement		
C4107.1	Demonstrate the basic concepts fundamental learning techniques and layers.		
C4107.2	Discuss the Neural Network training, various random models.		
C4107.3	Apply various optimization algorithms to comprehend different activation		
C4107.4	functions to understand hyper parameter tuning		
C4107.5	Build a convolutional neural network, and understand its application to build a recurrent neural network		
C4107.6	understand its usage to comprehend auto encoders to briefly explain transfer learning		

Course Name	Industrial/Research Internship (Mandatory)	Regulation	R -20
Course Outcome	Statement		
C4108.1	Participate in the projects in industries during his or her industrial training.		
C4108.2	Describe use of advanced tools and techniques encountered during industrial training and visit.		
C4108.3	Interact with industrial personnel and follow engineering practices and discipline prescribed in industry.		
C4108.4	Develop awareness about general workplace behavior and build interpersonal and team skills.		
C4108.5	Prepare professional work reports and presentations.		
C4108.6	Utilize self-assessment and reflective practice to identify and critically analyse personal strengths and development needs, to assist in future career development and planning.		

List of Course of IV B.Tech II Semester

Code	IV Year – II SEMESTER
C4201	Project (Major Project Work, Seminar Internship)

List of Course Outcomes of IV B. Tech II Semester

Course Name	Project (Major Project Work, Seminar Internship)	Regulation	R – 20
Course Outcome	Statement		
C4201.1	Identify the problem and formulate the appropriate solution		
C4201.2	Identify and analyze the requirements for a given project through literature survey		
C4201.3	Design various sub circuits as required to solve the problem.		
C4201.4	Test each sub circuit for its performance and limitations.		
C4201.5	Integrate various sub circuits as required within the time frame and test the same.		
C4201.6	Prepare the project thesis and present using appropriate method		