COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ARTIFICIAL INTELLIGENCE & DATA SCIENCE

Course Outcomes-2021 Scheme

S.No.	Subject Code	Course Code	Course Outcomes
	21MAT11 Calculus & 1 Differential Equations	C101.1	Apply the knowledge of calculus to solve problems related to polar curves and its applications in determining the bentness of a curve.
		C101.2	Learn the notion of partial differentiation to calculate rate of change of multivariate functions and solve problems related to composite functions and Jacobian.
1		C101.3	Solve first-order linear/nonlinear ordinary differential equations analytically using standard methods.
		C101.4	Demonstrate various models through higher order differential equations and solve such linear ordinary differential equations.
		C101.5	Test the consistency of a system of linear equations and to solve them by direct and iterative methods.

S.No.	Subject Code	Course Code	Course Outcomes
		C102.1	Interpret the types of mechanical vibrations and their applications, the role of Shock waves in various fields.
	21PHY12	C102.2	Demonstrate the quantisation of energy for microscopic system.
2	Engineering Physics	C102.3	Apply LASER and Optical fibers in opto electronic system.
		C102.4	Illustrate merits of quantum free electron theory and applications of Hall effect
		C102.5	Analyse the importance of XRD and Electron Microscopy in Nano material characterization.

S.No.	Subject Code	Course Code	Course Outcomes	
		C103.1	Analyse basic DC and AC electric circuits.	
	21ELE13	C103.2	Explain the working principles of transformers and	
	Basic		electrical machines.	
	Electrical	C103.3	Explain the concepts of electric power transmission	
3	Engineering		and distribution of power	

C103.4	Understand the wiring methods, electricity billing,
	and working principles of circuit protective devices
	and personal safety measures.

S.No.	Subject Code	Course Code	Course Outcomes			
		C104.1	Understand the various fields of civil engineering			
	21CIV14	C104.2	Compute the resultant of a force system and resolution of a force			
4	Elements of Civil Engineering and Mechanics	C104.3	Comprehend the action for forces, moments, and other types of loads on rigid bodies and compute the reactive forces			
		C104.4	Locate the centroid and compute the moment inertia of regular and built-up sections.			
		C104.5	Analyze the bodies in motion.			

S.No.	Subject Code	Course Code	Course Outcomes				
		C105.1	Understand and visualize the objects with definite shape and dimensions				
	21EVN15 5 Engineering Visualization	C105.2	Analyze the shape and size of objects through different views				
5		C105.3	Develop the lateral surfaces of the object				
		C105.4	Create a 3D view using CAD software.				
		C105.5	Identify the interdisciplinary engineering components or systems through its graphical representation.				

S.No.	Subject Code	Course Code	Course Outcomes	
	21PHYL16	C106.1	Understand the measuring techniques	
	Engineering	C106.2	Operate different instruments and be capable to	
6	Physics		analyse the experimental results.	
	Laboratory	C106.3	Construct the circuits and their analysis.	

S.No.	Subject Code	Course Code	Course Outcomes		
		C107.1	Verify KCL and KVL and maximum power transfer theorem for DC circuits.		
		C107.2	Compare power factors of different types of lamps.		
7	21ELEL17 Basic 7 Electrical	C107.3	Demonstrate the measurement of the impedance of an electrical circuit and power consumed by a 3- phase load.		
	Engineering	C107.4	Analyze two-way and three-way control of lamps.		
	Laboratory	C107.5	Explain the effects of open and short circuits in simple circuits.		

	C107.6	Interpret measured.		suitability	of	earth	resistance
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S.No.	Subject Code	Course Code Course Outcomes			
	21EGH18	C108.1	Understand and apply the Fundamentals of Communication Skills in their communication skills.		
		C108.2	Identify the nuances of phonetics, in to nation and enhance pronunciation skills.		
8	Communicative English	C108.3	To impart basic English grammar and essentials of language skills as per present requirement.		
		C108.4	Understand and use all types of English vocabulary and language proficiency.		
		C108.5	Adopt the Techniques of Information Transfer through the presentation.		

S.No.	Subject Code	Course Code	Course Outcomes			
	9 21IDT19 Innovation and Design Thinking	C109.1 Appreciate various design process procedu				
9		C109.2	Generate and develop design ideas through different technique			
		C109.3	Identify the significance of reverse Engineering to Understand products			
		C109.4	Draw technical drawing for design ideas			

S.No.	Subject Code	Course Code	Course Outcomes			
	21MAT21 Advanced Calculus and Numerical Methods	C110.1	Apply the concept of change of order of integration and change of variables to evaluate multiple integrals and their usage in computing the area and volume.			
10		C110.2	Illustrate the applications of multivariate calculus to understand the solenoidal and irrotational vectors and also exhibit the inter dependence of line, surface and volume integrals.			
		C110.3	Formulate physical problems to partial differential equations and to obtain solution for standard practical PDE's.			
		C110.4	Apply the knowledge of numerical methods in modelling of various physical and engineering phenomena.			
		C110.5	Solve first order ordinary differential equations arising in engineering problems.			

S.No.	Subject Code	Course Code	Course Outcomes
		C111.1	Discuss the electrochemical energy systems such as electrodes and batteries.
		C111.2	Explain the fundamental concepts of corrosion, its control and surface modification methods namely electroplating and electroless plating
11	21CHE22 Engineering Chemistry	C111.3	Enumerate the importance, synthesis and applications of polymers. Understand properties and application of nanomaterials.
		C111.4	Describe the principles of green chemistry, understand properties and application alternative fuels.
		C111.5	Illustrate the fundamental principles of water chemistry, applications of volumetric and analytical instrumentation.

S.No.	Subject Code	Course Code	Course Outcomes
	21PSP23 Problem- Solving through Programming	C112.1	Elucidate the basic architecture and functionalities of a computer and also recognize the hardware parts.
		C112.2	Apply programming constructs of C language to solve the real world problem
12		C112.3	Explore user-defined data structures like arrays in implementing solutions to problems like searching and sorting
		C112.4	Explore user-defined data structures like structures, unions and pointers in implementing solutions
		C112.5	Design and Develop Solutions to problems using modular programming constructs using functions

S.No.	Subject Code	Course Code	Course Outcomes
	21ELN24 Basic Electronics & Communication Engineering	C113.1	Describe the concepts of electronic circuits encompassing power supplies, amplifiers and oscillators.
13		C113.2	Present the basics of digital logic engineering including data representation, circuits and the microcontroller system with associated sensors and actuators.
		C113.3	Discuss the characteristics and technological advances of embedded systems.
		C113.4	Relate to the fundamentals of communication engineering spanning from the frequency spectrum to the various circuits involved including antennas.

C113.5	Explain the different modes of communications from wired to wireless and the computing involved.
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S.No.	Subject Code	Course Code	Course Outcomes
	21EME25 Elements of Mechanical Engineering	C114.1	Understand basic concepts of mechanical engineering in the fields of energy and its utilization, materials technology, manufacturing techniques, and transmission systems through demonstrations.
14		C114.2	Understand the application of energy sources in Power generation and utilization, Engineering materials, manufacturing, and machining techniques leading to the latest advancements and transmission systems in day to day activities
		C114.3	Apply the skills in developing simple mechanical elements and processes

S.No.	Subject Code	Course Code	Course Outcomes
		C115.1	Determine the pKa and coefficient of Viscosity of a given organic liquid.
	21CHEL26 Engineering Chemistry Laboratory	C115.2	Estimate the amount of substance present in the given solution using Potentiometer Conductometric and Colorimetric.
15		C115.3	Determine the total hardness and chemical oxygen demand in the given solution by volumetric analysis method
		C115.4	Estimate the percentage of Nickel, copper and Iron in the given analyte solution by titration method.
		C115.5	Demonstrate flame photometric estimation of sodium & potassium and the synthesis of nanomaterials by Precipitation method.

S.No.	Subject Code	Course Code	Course Outcomes
	21CPL27 Computer Programming Laboratory	C116.1	Define the problem statement and identify the need for computer programming
		C116.2	Make use of C compiler, IDE for programming, identify and correct the syntax and syntactic errors in programming
16		C116.3	Develop algorithm, flowchart and write programs to solve the given problem
		C116.4	Demonstrate use of functions, recursive functions, arrays, strings, structures and pointers in problem solving.

C1165	Document the inference and observations made
C110.3	from the implementation

S.No.	Subject Code	Course Code	Course Outcomes
	21EGH28 Professional Writing Skills in English	C117.1	To understand and identify the Common Errors in Writing and Speaking.
		C117.2	To Achieve better Technical writing and Presentation skills.
17		C117.3	To read Technical proposals properly and make them to Write good technical reports.
		C117.4	Acquire Employment and Workplace communication skills.
		C117.5	To learn about Techniques of Information Transfer through presentation in different level.

S.No.	Subject Code	Course Code	Course Outcomes
		C118.1	To understand Health and wellness (and its Beliefs)
	21SFH29 Scientific Foundations of Health	C118.2	To acquire Good Health & It's balance for positive mindset
		C118.3	To inculcate and develop the healthy lifestyle habits for good health.
18		C118.4	To Create of Healthy and caring relationships to meet the requirements of MNC and LPG world
		C118.5	To adopt the innovative & positive methods to avoid risks from harmful habits in their campus & outside the campus.
		C118.6	To positively fight against harmful diseases for good health through positive mindset.

S.No.	Subject Code	Course Code	Course Outcomes	
	21MAT31 Transform Calculus, Fourier Series and Numerical Techniques	Transform Calculus, Fourier Series and Numerical	C201.1	To solve ordinary differential equations using Laplace transform.
19			C201.2	Demonstrate the Fourier series to study the behaviour of periodic functions and their applications in system communications, digital signal processing and field theory.
			C201.3	To use Fourier transforms to analyze problems involving continuous-time signals and to apply Z- Transform techniques to solve difference equations
		C201.4	To solve mathematical models represented by initial or boundary value problems involving partial differential equations	

C201 5	Determine the extremals of functionals using calculus of variations and solve problems arising in
	dynamics of rigid bodies and vibrational analysis.

S.No.	Subject Code	Course Code	Course Outcomes
	21CS32 Data Structures & Applications	C202.1	Identify different data structures and their applications.
		C202.2	Apply stack and queues in solving problems.
20		C202.3	Demonstrate applications of linked list.
		C202.4	Explore the applications of trees and graphs to model and solve the real- world problem.
		C202.5	Make use of Hashing techniques and resolve collisions during mapping of key value pairs

S.No.	Subject Code	Course Code	Course Outcomes
	21CS33	C203.1	Design and analyze application of analog circuits using photo devices, timer IC, power supply and regulator IC and op-amp.
	Analog and	C203.2	Explain the basic principles of A/D and D/A conversion circuits and develop the same
21	21 Digital Electronics	C203.3	Simplify digital circuits using Karnaugh Map, and Quine-McClusky Methods
		C203.4	Explain Gates and flip flops and make us in designing different data processing circuits, registers and counters and compare the types.
		C203.5	Develop simple HDL programs

S.No.	Subject Code	Course Code	Course Outcomes
	21CS34 Computer Organization and	C204.1	Explain the organization and architecture of computer systems with machine instructions and programs
		C204.2	Analyse the input/output devices communicating with computer system
22		C204.3	Demonstrate the functions of different types of memory devices
	Architecture	C204.4	Apply different data types on simple arithmetic and logical unit
		C204.5	Analyze the functions of basic processing unit, Parallel processing and pipelining

S.No.	Subject Code	Course Code	Course Outcomes
	21CSL35 Object Oriented Programming with JAVA Laboratory	C205.1	Use Eclipse/NetBeans IDE to design, develop, debug Java Projects.
23		C205.2 C205.3	Analyze the necessity for Object Oriented Programming paradigm over structured programming and become familiar with the fundamental concepts in OOP. Demonstrate the ability to design and develop java programs, analyze, and interpret object oriented
		C205.4	data and document results. Apply the concepts of multiprogramming, exception/event handling, abstraction to develop robust programs.
		C205.5	Develop user friendly applications using File I/O and GUI concepts.

S.No.	Subject Code	Course	Course Outcomes
		Code	
		C206.1	Communicate and connect to the surrounding
		C206.2	Create a responsible connection with the society
	21SCR36 Social Connect & Responsibilities	C206.3	Involve in the community in general in which they work
		C206.4	Notice the needs and problems of the community and involve them in problem –solving
24		C206.5	Develop among themselves a sense of social & civic responsibility & utilize their knowledge in finding practical solutions to individual and community problems.
		C206.6	Develop competence required for group-living and sharing of responsibilities & gain skills in mobilizing community participation to acquire leadership qualities and democratic attitudes.

S.No.	Subject Code	Course Code	Course Outcomes
	21CIP37 25 Constitution of India and	C207.1	Analyse the basic structure of Indian Constitution.
		C207.2	Remember their Fundamental Rights, DPSP's and Fundamental Duties (FD's) of our constitution
25		C207.3	know about our Union Government, political structure & codes, procedures.
		C207.4	Understand our State Executive & Elections system of India

Professional		Remember the Amendments and Emergency
Ethics	C207.5	Provisions, other important provisions given by the
		constitution.

S.No.	Subject Code	Course Code	Course Outcomes
	21CSL381 Microsoft Office	C208.1	Know the basics of computers and prepare documents, spreadsheets, make small presentations with audio, video and graphs and would be acquainted with internet.
26		C208.2	Create, edit, save and print documents with list tables, header, footer, graphic, spellchecker, mail merge and grammar checker
		C208.3	Attain the knowledge about spreadsheet with formula, macros spell checker etc.
		C208.4	Demonstrate the ability to apply application software in an office environment.
		C208.5	Use Google Suite for office data management tasks

S.No.	Subject Code	Course Code	Course Outcomes
	21MATDIP31 Additional Mathematics-I	C209.1	Use derivatives and partial derivatives to calculate the rate of change of multivariate functions.
27		C209.2	Apply concepts of complex numbers and vector algebra to analyse the problems arising in a related area.
		C209.3	Analyse position, velocity and acceleration in two and three dimensions of vector-valued functions.
		C209.4	Learn techniques of integration including the evaluation of double and triple integrals.
		C209.5	Identify and solve first-order ordinary differential equations

S.No.	Subject Code	Course Code	Course Outcomes
		C210.1	Apply the concepts of logic for effective computation and relating problems in the Engineering domain.
	21CS41	C210.2	Analyze the concepts of functions and relations to various fields of Engineering. Comprehend the concepts of Graph Theory for various applications of Computational sciences.
28	Mathematical Foundations for Computing	C210.3	Apply discrete and continuous probability distributions in analysing the probability models arising in the engineering field.

C210.4	Make use of the correlation and regression analysis to fit a suitable mathematical model for the statistical data.
C210.5	Construct joint probability distributions and demonstrate the validity of testing the hypothesis.

S.No.	Subject Code	Course Code	Course Outcomes
		C211.1	Analyze the performance of the algorithms, state the efficiency using asymptotic notations and analyze mathematically the complexity of the algorithm.
	21CS42 Design and Analysis of Algorithms	C211.2	Apply divide and conquer approaches and decrease and conquer approaches in solving the problems analyze the same
29		C211.3	Apply the appropriate algorithmic design technique like greedy method, transform and conquer approaches and compare the efficiency of algorithms to solve the given problem.
		C211.4	Apply and analyze dynamic programming approaches to solve some problems. and improve an algorithm time efficiency by sacrificing space.
		C211.5	Apply and analyze backtracking, branch and bound methods and to describe P, NP and NP Complete problems.

S.No.	Subject Code	Course Code	Course Outcomes
	Subject Code 21CS43 Microcontroller and Embedded Systems	C212.1	Explain C-Compilers and optimization
		C212.2	Describe the ARM microcontroller's architectural features and program module.
30		C212.3	Apply the knowledge gained from programming on ARM to different applications.
		C212.4	Program the basic hardware components and their application selection method.
		C212.5	Demonstrate the need for a real-time operating system for embedded system applications.

S.No.	Subject Code	Course Code	Course Outcomes
		C213.1	Identify the structure of an operating system and its scheduling mechanism.
	21CS44	C213.2	Demonstrate the allocation of resources for a process using scheduling algorithm.
31	Operating Systems	C213.3	Identify root causes of deadlock and provide the solution for deadlock elimination

C213.4	Explore about the storage structures and learn about the Linux Operating system.
C213.5	Analyze Storage Structures and Implement Customized Case study

S.No.	Subject Code	Course Code	Course Outcomes
	21BE45 Biology For Engineers	C214.1	Elucidate the basic biological concepts via relevant industrial applications and case studies.
32		C214.2	Evaluate the principles of design and development, for exploring novel bioengineering projects
		C214.3	Corroborate the concepts of biomimetics for specific requirements.
		C214.4	Think critically towards exploring innovative biobased solutions for socially relevant problems

S.No.	Subject Code	Course Code	Course Outcomes		
	21CSL46	C215.1	Demonstrate proficiency in handling of loops and creation of functions.		
		C215.2	Identify the methods to create and manipulate lists, tuples and dictionaries.		
33	Python Programming	C215.3	Demonstrate proficiency in handling of loops and creation of functions. Identify the methods to create and manipulate lists, tuples and dictionaries. Discover the commonly used operations involving regular expressions and file system.		
	Laboratory	C215.4	Interpret the concepts of Object-Oriented Programming as used in Python.		
		C215.5	Tuples and dictionaries. Discover the commonly used operations involving regular expressions and file system. Interpret the concepts of Object-Oriented Programming as used in Python. Determine the need for scraping websites and		

S.No.	Subject	Course	Course Outcomes	
	Code	Code		
		C216.1	ಕನ್ನಡ ಭಾಷೆ, ಸಾಹಿತ್ಯ ಮತ್ತು ಕನ್ನಡದ ಸಂಸ್ಕೃತಿಯ ಪರಿಚಯವಾಗುತ್ತದೆ.	
	21KSK47 Samskrutika Kannada	C216.2	ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಆಧುನಿಕ ಪೂರ್ವ ಮತ್ತು ಆಧುನಿಕ ಕಾವ್ಯಗಳು ಮತ್ತು ಸಂಸ್ಕೃತಿಯ ಬಗ್ಗೆ ಅಸಕ್ತಿಯು ಮೂಡುತ್ತದೆ.	
		C216.3	ತಾಂತ್ರಿಕ ವ್ಯಕ್ತಿಗಳ ಪರಿಚಯವಾಗುತ್ತದೆ.	
34		C216.4	ಕನ್ನಡ ಭಾಷಾಭ್ಯಾಸ, ಸಾಮಾನ್ಯ ಕನ್ನಡ ಹಾಗೂ ಆಡಳಿತ ಕನ್ನಡದ ಪದಗಳ ಪರಿಚಯವಾಗುತ್ತ	
	OR			
		C216.1	To understand the necessity of learning of local language for comfortable life	
	21KSK47	C216.2	To Listen and understand the Kannada language properly.	
	Balake Kannada	C216.3	To speak, read and write Kannada language as per requirement.	

C216.4	To communicate (converse) in Kannada language in their daily life with kannada speakers.
	To speak in polite conservation.

S.No.	Subject Code	Course Code	Course Outcomes
		C217.1	Describe the fundamentals of web and concept of HTML.
	21CSL481 Web	C217.2	Use the concepts of HTML, XHTML to construct the web pages.
35	Programming	C217.3	Interpret CSS for dynamic documents.
		C217.4	Evaluate different concepts of JavaScript & Construct dynamic documents.
		C217.5	Design a small project with JavaScript and XHTML.

S.No.	Subject Code	Course Code	Course Outcomes
	21UH49 Universal	C218.1	to become more aware of themselves, and their surroundings (family, society, nature)
36		C218.2	they would become more responsible in life, and in handling problems with sustainable solutions, while keeping human relationships and human nature in mind.
	Human Values	C218.3	They would have better critical ability.
		C218.4	They would also become sensitive to their commitment towards what they have understood (human values, human relationship and human society).
		C218.5	they would be able to apply what they have learnt to their own self in different day-to-day settings in real life, at least a beginning would be made in this direction.

S.No.	Subject Code	Course Code	Course Outcomes	
		C219.1	Test for consistency and solve the system of linear equations	
			C	C219.2
	21MATDIP41	C219.3	Apply elementary probability theory and solve related problems	
37	Additional Mathematics- II	C219.4	To interpolate/extrapolate from the given data	
		C219.5	Apply the knowledge of numerical methods in modelling and solving engineering problems	

S.No.	Subject Code	Course Code	Course Outcomes
		C220.1	Construct the company profile by compiling the brief history, management structure, products / services offered, key achievements and market performance for his / her organization of internship.
	21INT49 Inter/Intra Institutional Internship	C220.2	Determine the challenges and future potential for his / her internship organization in particular and the sector in general.
38		C220.3	Test the theoretical learning in practical situations by accomplishing the tasks assigned during the internship period.
		C220.4	Apply various soft skills such as time management, positive attitude and communication skills during performance of the tasks assigned in internship organization
		C220.5	Analyze the functioning of internship organization and recommend changes for improvement in processes.

S.No.	Subject Code	Course Code	Course Outcomes
		C301.1	Acquire fundamental understanding of the core concepts in automata theory and Theory of Computation
		C301.2	Design and develop lexical analyzers, parsers and code generators
39	21CS51 Automata Theory and Compiler Design	C301.3	Design Grammars and Automata (recognizers) for different language classes and become knowledgeable about restricted models of Computation (Regular, Context Free) and their relative powers.
		C301.4	Acquire fundamental understanding of the structure of a Compiler and Apply concepts automata theory and Theory of Computation to design Compilers
		C301.5	Design computations models for problems in Automata theory and adaptation of such model in the field of compilers

S.No.	Subject Code	Course	Course Outcomes
		Code	
		C302.1	Learn the basic needs of communication system.
		C302.2	Interpret the communication challenges and its
	21CS52	C302.2	solution.
40	Computer	C302.3	Identify and organize the communication system
	Networks	0302.5	network components

requirements.

S.No.	Subject Code	Course Code	Course Outcomes
	21CS53 Database Management Systems	C303.1	Identify, analyze and define database objects, enforce integrity constraints on a database using RDBMS
41		C303.2	Use Structured Query Language (SQL) for database manipulation and also demonstrate the basic of query evaluation.
		C303.3	Design and build simple database systems and relate the concept of transaction, concurrency control and recovery in database
		C303.4	Develop application to interact with databases, relational algebra expression.
		C303.5	Develop applications using tuple and domain relation expression from queries.

S.No.	Subject Code	Course Code	Course Outcomes
	21AI54 Principles of Artificial Intelligence	C304.1	Apply knowledge of agent architecture, searching and reasoning techniques for different applications.
		C304.2	Analyse Searching and Inferencing Techniques.
42		C304.3	Develop knowledge base sentences using propositional logic and first order logic
		C304.4	Demonstrating agents, searching and inferencing
		C304.5	Illustrate the application of probability in uncertain reasoning.

S.No.	Subject Code	Course Code	Course Outcomes
43	21CSL55 Database	C305.1	Create, Update and query on the database.
	Management System	C305.2	Demonstrate the working of different concepts of DBMS
	Laboratory with Mini Project	C305.3	Implement, analyze and evaluate the project developed for an application.

S.No.	Subject Code	Course Code	Course Outcomes
		C306.1	To know the meaning of engineering research
	21RMI56	C306.2	To know the procedure of Literature Review and Technical Reading.

44	Research Methodology	C306.3	To know the fundamentals of patent laws and drafting a procedure
	& Intellectual Property	C306.4	Understanding the copyright laws and subject matters of copyrights and designs
	Rights	C306.5	Understanding the basic principles of design rights.

S.No.	Subject Code	Course Code	Course Outcomes
		C307.1	Understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale
45	21CIV57	C307.2	Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment.
	Environmental Studies C307	C307.3	Demonstrate ecology knowledge of a complex relationship between biotic and a biotic components.
		C307.4	Apply their ecological knowledge to illustrate and graph a problem and describe the realities that managers face when dealing with complex issues.

S.No.	Subject Code	Course Code	Course Outcomes
		C308.1	Describe the features of Angular JS.
		C308.2	Recognize the form validations and controls.
46	21CSL581	C308.3	Implement Directives and Controllers.
	Angular Js and	C308.4	Evaluate and create database for simple application.
	Node Js	C308.5	Plan and build webservers with node using Node
		C308.3	.JS.

S.No.	Subject Code	Course Code	Course Outcomes
	21CS61 Software Engineering & Project Management	C309.1	Understand the activities involved in software engineering and analyze the role of various process models
		C309.2	Explain the basics of object-oriented concepts and build a suitable class model using modelling techniques
47		C309.3	Describe various software testing methods and to understand the importance of agile methodology and DevOps
		C309.4	Illustrate the role of project planning and quality management in software development
		C309.5	Understand the importance of activity planning and different planning models

S.No.	Subject Code	Course Code	Course Outcomes
		C310.1	Identify and demonstrate data using visualization tools.
	21AD62 Data Science and its ApplicationsC310.2C310.3C310.4C310.5	C310.2	Make use of Statistical hypothesis tests to choose the properties of data, curate and manipulate data.
48		C310.3	Utilize the skills of machine learning algorithms and techniques and develop models.
		C310.4	Demonstrate the construction of decision tree and data partition using clustering.
		Experiment with social network analysis and make use of natural language processing skills to develop data driven applications	

S.No.	Subject Code	Course Code	Course Outcomes
		C311.1	Understand the concept of Machine Learning and Concept Learning.
			Apply the concept of ML and various classification methods in a project.
49	21AI63 Machine	C311.3	Analyse various training models in ML and the SVM algorithm to be implemented.
	Learning	C311.4	Apply the ML concept in a decision tree structure and implementation of Ensemble learning and Random Forest.
		C311.5	Apply Bayes techniques and explore more about the classification in ML.

S.No.	Subject Code	Course Code	Course Outcomes
	21AI643 Natural Language Processing	C312.1	Analyse the natural language text.
50		C312.2	Define the importance of natural language.
		C312.3	Understand the concepts Text mining.
		C312.4	Illustrate information retrieval techniques.

S.No.	Subject Code	Course	Course Outcomes
		Code	
		C313.1	Apprehend various components of land as a natural
			resource and land use planning.
		C313.2	Know availability and demand for water resources
	21CV654	C315.2	as applied to India.
51		C313.3	Analyse the components of air as resource and its
		C313.5	pollution.

Conservation	C313.4	Discuss biodiversity & its role in ecosystem
of Natural		functioning.
Resources	C313.5	Critically appreciate the environmental concerns of
		today.

S.No.	Subject Code	Course Code	Course Outcomes
		C314.1	Understand the Importance of different classification and clustering algorithms.
52	21AIL66 Machine	C314.2	Demonstrate the working of various algorithms with respect to training and test data sets.
	Learning Laboratory	C314.3	Illustrate and analyze the principles of Instance based and Reinforcement learning techniques.
		C314.4	Elicit the importance and Applications of Supervised and unsupervised machine learning.
		C314.5	Compare and contrast the Bayes theorem principles and Q learning approach

S.No.	Subject Code	Course Code	Course Outcomes
53	21ADMP67 Mini Project	C315.1	Perform a literature search to review current knowledge and developments in the chosen technical area.
		C315.2	Undertake detailed technical work in the chosen area
		C315.3	Prepare reports to establish work completed, and to schedule any additional changes to be done within the specified time frame for the project.
		C315.4	Deliver presentation on the area of work being done and any specific contributions done related to the field of work
		C315.5	Prepare a formal report describing the work undertaken and results obtained also to publish work in National / International proceedings to compete and upgrade the work

S.No.	Subject Code	Course Code	Course Outcomes
54	54 21INT68 Innovation/ Entrepreneursh ip/	C316.1	Construct the company profile by compiling the brief history, management structure, products / services offered, key achievements and market performance for his / her organization of internship.
	Societal Internship	C316.2	Determine the challenges and future potential for his / her internship organization in particular and the sector in general.

C316.3	Test the theoretical learning in practical situations by accomplishing the tasks assigned during the internship period.
C316.4	Apply various soft skills such as time management, positive attitude and communication skills during performance of the tasks assigned in internship organization
C316.5	Analyze the functioning of internship organization and recommend changes for improvement in processes.