Course outcomes 2021 scheme

1) **Course Name: Transform Calculus, Fourier Series And Numerical Techniques 21MAT31**

C201.1	To solve ordinary differential equations using Laplace transform.
C201.2	Demonstrate 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.

2) **Course Name: Data Structures And Applications 21CS32**

C202.1	Identify different data structures and their applications.
C202.2	Apply stack and queues in solving problems.
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.

3) **Course Name: Analog And Digital Electronics 21CS33**

C203.1	Design and analyze application of analog circuits using photo devices, timer IC, power supply and regulator IC and op-amp.
C203.2	Explain the basic principles of A/D and D/A conversion circuits and develop the same.
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.

4) **Course Name: Computer Organization And Architecture 21CS34**

C204.1	Explain the organization and architecture of computer systems with machine instructions and programs.
C204.2	Analyze the input/output devices communicating with computer system.
C204.3	Demonstrate the functions of different types of memory devices.
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.

5) **Course Name: Object Oriented Programming With Java Laboratory Course Code 21CSL35**

C205.1	Use Eclipse/NetBeans IDE to design, develop, debug Java Projects.
C205.2	Analyze the necessity for Object Oriented Programming paradigm over structured programming and become familiar with the fundamental concepts in OOP.
C205.3	Demonstrate the ability to design and develop java programs, analyze, and interpret objectoriented data and document results.
C205.4	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.

6) **Course Name: Mastering Office (Practical based) 21CSL381**

C206.1	Know the basics of computers and prepare documents, spreadsheets, make small presentations with audio, video and graphs and would be acquainted with internet.
C206.2	Create, edit, save and print documents with list tables, header, footer, graphic, spellchecker, mail merge and grammar checker.
C206.3	Attain the knowledge about spreadsheet with formula, macros spell checker etc.
C206.4	Demonstrate the ability to apply application software in an office environment.
C206.5	Use Google Suite for office data management tasks.

7) **Course Name: Engineering Mathematics - IV 21MAT41**

C211.1	Apply the concepts of logic for effective computation and relating problems in the engineering domain.
C211.2	Analyse the concepts of functions and relations to various fields of engineering. Comprehend the concepts of graph theory for various applications of computational sciences.
C211.3	Apply discrete and continuous probability distributions in analysing the probability models arising in the engineering fields.
C211.4	Make use of the correlation and regression analysis to fit a suitable mathematical model for the statistical data.
C211.5	Construct joint probability distributions and demonstrate the validity of testing the hypothesis.

8) **Course Name: Design And Analysis Of Algorithms 21CS42**

C212.1	Analyze the performance of the algorithms, state the efficiency using asymptotic notations and analyze mathematically the complexity of the algorithm.
C212.2	Apply divide and conquer approaches and decrease and conquer approaches in solving the problems analyze the same
C212.3	Apply the appropriate algorithmic design technique like greedy method, transform and conquer approaches and compare the efficiency of algorithms to solve the given problem.
C212.4	Apply and analyze dynamic programming approaches to solve some problems. and improve an algorithm time efficiency by sacrificing space.
C212.5	Apply and analyze backtracking, branch and bound methods and to describe P, NP and NPComplete problems.

9) Course Name: Microcontroller And Embedded Systems 21CS43

C213.1	Explain C-Compilers and optimization
C213.2	Describe the ARM microcontroller's architectural features and program module.
C213.3	Apply the knowledge gained from programming on ARM to different applications.
C213.4	Program the basic hardware components and their application selection method.
C213.5	Demonstrate the need for a real-time operating system for embedded system applications.

10) Course Name: Operating Systems 21CS44

C214.1	Identify the structure of an operating system and its scheduling mechanism.
C214.2	Demonstrate the allocation of resources for a process using scheduling algorithm.
C214.3	Identify root causes of deadlock and provide the solution for deadlock elimination
C214.4	Explore about the storage structures and learn about the Linux Operating system.
C214.5	Analyze Storage Structures and Implement Customized Case study

11) Course Name: Python Programming Laboratory 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.
C215.3	Discover the commonly used operations involving regular expressions and file system.
C215.4	Interpret the concepts of Object-Oriented Programming as used in Python.
C215.5	Determine the need for scraping websites and working with PDF, JSON and other file formats.

12) Course Name: Web Programming (Practical based) 21CSL481

C216.1	Describe the fundamentals of web and concept of HTML.
C216.2	Use the concepts of HTML, XHTML to construct the web pages.
C216.3	Interpret CSS for dynamic documents.
C216.4	Evaluate different concepts of JavaScript & Construct dynamic documents.
	Design a small project with JavaScript and XHTML.

13) Course Name: Automata Theory And Compiler Design 21CS51

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.
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.

14)Course Name: Computer Networks 21CS52

C302.1	Learn the basic needs of communication system.
C302.2	Interpret the communication challenges and its solution.
C302.3	Identify and organize the communication system network components.
C302.4	Design communication networks for user requirements.

15) Course Name: Database Management Systems 21CS53

C303.1	Identify, analyze and define database objects, enforce integrity constraints on a database using RDBMS.
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. Identify, analyze and define database objects, enforce integrity constraints on a database using RDBMS.

16) Course Name: Artificial Intelligence And Machine Learning 21CS54

C304.1	Apply the knowledge of searching and reasoning techniques for different applications.
C304.2	Have a good understanding of machine leaning in relation to other fields and fundamental issues and challenges of machine learning.
C304.3	Apply the knowledge of classification algorithms on various dataset and compare results.
C304.4	Model the neuron and Neural Network, and to analyze ANN learning and its applications.
C304.5	Identifying the suitable clustering algorithm for different pattern.

17) Course Name: Database Management System Laboratory With Mini Project 21CSL55

C305.1	Create, Update and query on the database.
C305.2	Demonstrate the working of different concepts of DBMS.
C305.3	Implement, analyze and evaluate the project developed for an application.

18) **Course Name: C# And .Net Framework 21CS582**

C306.1	Able to explain how C# fits into the .NET platform.
C306.2	Describe the utilization of variables and constants of C#.
C306.3	Use the implementation of object-oriented aspects in applications.

C306.4	Analyze and Set up Environment of .NET Core.
C306.5	Evaluate and create a simple project application.