Course outcomes 2017 scheme

1) Course Name: Engineering Mathematics   17MAT11

C101.1	Use partial derivatives to calculate rates of change of multivariate functions.
C101.2	Analyze position, velocity, and acceleration in two or three dimensions using the calculus of vector valued functions.
C101.3	Recognize and solve first-order ordinary differential equations, Newton's law of cooling
C101.4	Use matrices techniques for solving systems of linear equations in the different areas of Linear Algebra.

2) Course Name: Engineering Physics 17PHY12/22

C102.1	Learn and understand more about basic principles and to develop problem solving skills and implementation in technology.
C102.2	Gain Knowledge about Modern physics and quantum mechanics will update the basic concepts to implement the skills.
C102.3	Study of material properties and their applications is the prime role to understand and use in engineering applications and studies.
C102.4	Study Lasers and Optical fibers and its applications are to import knowledge and to develop skills and to use modern instruments in the engineering applications.
C102.5	Understand Crystal structure and applications are to boost the technical skills and its applications.
C102.6	Expose shock waves concept and its applications will bring latest technology to the students at the first year level to develop research orientation programs at higher semester level.
C102.7	Understand basic concepts of nano science and technology.

3) Course Name: Elements of Civil Engineering and Mechanics 17CIV13/23

C103.1	Know basics of Civil Engineering, its scope of study, knowledge about Roads, Bridges and Dams
C103.2	Comprehend the action of Forces, Moments and other loads on systems of rigid bodies
C103.3	Compute the reactive forces and the effects that develop as a result of the external loads
C103.4	Locate the Centroid and compute the Moment of Inertia of regular cross sections.
C103.5	Express the relationship between the motion of bodies and
C103.6	Equipped to pursue studies in allied courses in Mechanics.

4) Course Name: Computer Aided Engineering Drawing 17CED14/24

C104.1	Students will be able to demonstrate the usage of CAD software.
C104.2	Students will be able to visualize and draw Orthographic projections, Sections of solids and Isometric views of solids.
C104.3	Students are evaluated for their ability in applying various concepts to solve practical problems related to engineering drawing.

5) Course Name: Basic Electrical Engineering 17ELE15/25

C105.1	To predict the behaviour of electrical and magnetic circuits.
C105.2	Select the type of generator / motor required for a particular application.
C105.3	Realize the requirement of transformers in transmission and distribution of electric power and other applications.
C105.4	Practice Electrical Safety Rules & standards.
C105.5	To function on multi-disciplinary teams.

6) Course Name: Engineering Mathematics   17MAT21

C111.1	Solve differential equations of electrical circuits, forced oscillation of mass spring and elementary heat transfer.
C111.2	Solve partial differential equations fluid mechanics, electromagnetic theory and heat transfer.
C111.3	Evaluate double and triple integrals to find area , volume, mass and moment of inertia of plane and solid region.
C111.4	Use curl and divergence of a vector valued functions in various applications of electricity, magnetism and fluid flows.
C111.5	Use Laplace transforms to determine general or complete solutions to linear ODE

7) Course Name: Engineering Chemistry 17CHE12/22

C112.1	Electrochemical and concentration cells. Classical & modern batteries and fuel cells.
C112.2	Causes & effects of corrosion of metals and control of corrosion. Modification of surface properties of metals to develop resistance to corrosion, wear, tear, impact etc. by electroplating and electro less plating.
C112.3	Production & consumption of energy for industrialization of country and living standards of people. Utilization of solar energy for different useful forms of energy.
C112.4	Replacement of conventional materials by polymers for various applications.
C112.5	Boiler troubles; sewage treatment and desalination of sea water, and
C112.6	Over viewing of synthesis, properties and applications of nano materials

8) Course Name: Programming in C and Data Structures 17PCD13/23

C113.1	Achieve Knowledge of design and development of C problem solving skills.
C113.2	Understand the basic principles of Programming in C language
C113.3	Design and develop modular programming skills.
C113.4	Effective utilization of memory using pointer technology
C113.5	Understands the basic concepts of pointers and data structures.

9) Course Name: Elements of Mechanical Engineering 17EME14/24

C114.1	Various Energy sources, Boilers, Prime movers such as turbines and IC engines, refrigeration and air-conditioning systems
C114.2	Metal removal process using Lathe, drilling, Milling Robotics and Automation.
C114.3	Fair understanding of application and usage of various engineering materials.

10) Course Name: Basic Electronics 17ELN15 / 25

C115.1	Appreciate the significance of electronics in different applications,
C115.2	Understand the applications of diode in rectifiers, filter circuits and wave shaping,
C115.3	Apply the concept of diode in rectifiers, filters circuits
C115.4	Design simple circuits like amplifiers (inverting and non inverting), comparators, adders, integrator and differentiator using OPAMPS
C115.5	Compile the different building blocks in digital electronics using logic gates and implement simple logic function using basic universal gates
C115.6	Understand the functioning of a communication system, and different modulation technologies
C115.7	Understand the basic principles of different types of Transuducers.

11) Course Name: Engineering Mathematics 17MAT31

C201.1	Know the use of periodic signals and Fourier series to analyze circuits and system communications.
C201.2	Explain the general linear system theory for continuous-time signals and digital signal processing using the Fourier Transform and z-transform.
C201.3	Employ appropriate numerical methods to solve algebraic and transcendental equations.
C201.4	Apply Green's Theorem, Divergence Theorem and Stokes' theorem in various applications in the field of electro-magnetic and gravitational fields and fluid flow problems.
C201.5	Determine the extremals of functionals and solve the simple problems of the calculus of variations.

12) Course Name: Analog and Digital Electronics 17CS32

C202.1	Explain the operation of JFETs and MOSFETs , Operational Amplifier circuits and their application, Design of Counters, Registers and A/D & D/A converters
C202.2	Explain Combinational Logic, Simplification Techniques using Karnaugh Maps, Quine McClusky technique.
C202.3	Demonstrate Operation of Decoders, Encoders, Multiplexers, Adders and Subtractors, working of Latches, Flip-Flops, Designing Registers, Counters, A/D and D/A Converters
C202.4	Design of Counters, Registers and A/D & D/A converters

13) Course Name: Data Structures and Applications 17CS33

C203.1	Explain different types of data structures, operations and algorithms
C203.2	Apply searching and sorting operations on files
C203.3	Make Use of stack, Queue, Lists, Trees and Graphs in problem solving
C203.4	Develop all data structures in a high-level language for problem solving.

14) Course Name: Computer Organization 17CS34

C204.1	Explain the basic organization of a computer system..
C204.2	Demonstrate functioning of different sub systems, such as processor, Input/output,and memory
C204.3	Illustrate hardwired control and micro programmed control. pipelining, embedded and other computing systems.
C204.4	Build simple arithmetic and logical units.

15) Course Name: Unix and Shell Programming 17CS35

C205.1	Explain UNIX system and use different commands.
C205.2	Compile Shell scripts for certain functions on different subsystems.
C205.3	Demonstrate use of editors and Perl script writing

16) Course Name: Discrete Mathematical Structures 17CS36

C206.1	Make Use of propositional and predicate logic in knowledge representation and truth verification.
C206.2	Demonstrate the application of discrete structures in different fields of computer science.
C206.3	Solve problems using recurrence relations and generating functions
C206.4	Apply different mathematical proofs, techniques in proving theorems.
C206.5	Compare graphs, trees and their applications.

17) Course Name: Engineering Mathematics - IV 17MAT41

C211.1	Solve first and second order ordinary differential equation arising in flow problems using single step and multistep numerical methods.
C211.2	Illustrate problems of potential theory, quantum mechanics and heat conduction by employing notions and properties of Bessel"s functions and Legendre"s polynomials.
C211.3	Explain the concepts of analytic functions, residues, poles of complex potentials and describe conformal and Bilinear transformation arising in field theory and signal processing.
C211.4	Develop probability distribution of discrete, continuous random variables and joint probability distribution occurring in digital signal processing, information theory and design engineering.
C211.5	Demonstrate testing of hypothesis of sampling distributions and illustrate examples of Markov chains related to discrete parameter stochastic process.

18) Course Name: Object Oriented Xoncepts17CS42

C212.1	Explain the object-oriented concepts and JAVA.
C212.2	Develop computer programs to solve real world problems in Java.
C212.3	Develop simple GUI interfaces for a computer program to interact with users, and to comprehend the event-based GUI handling principles using Applets and swings.

19) Course Name: Design And Analysis Of Algorithms 17CS43

C213.1	Describe computational solution to well known problems like searching, sorting etc.
C213.2	Estimate the computational complexity of different algorithms.
C213.3	Develop an algorithm using appropriate design strategies for problem solving.

20) Course Name: Microprocessors And Microcontrollers17CS44

C214.1	Differentiate between microprocessors and microcontrollers
C214.2	Develop assembly language code to solve problems
C214.3	Explain interfacing of various devices to x86 family and ARM processor
C214.4	Demonstrate interrupt routines for interfacing devices

21) Course Name: Software Engineering 17CS45

C215.1	Design a software system, component, or process to meet desired needs within realistic constraints.
C215.2	Assess professional and ethical responsibility
C215.3	Function on multi-disciplinary teams
C215.4	Make use of techniques, skills, and modern engineering tools necessary for engineering practice
C215.5	Comprehend software systems or parts of software systems.

22) Course Name: Data Communication17CS46

C216.1	Illustrate basic computer network technology.
C216.2	Identify the different types of network topologies and protocols.
C216.3	List and explain the layers of the OSI model and TCP/IP model.
C216.4	Comprehend the different types of network devices and their functions within a network
C216.5	Demonstrate subnetting and routing mechanisms.

23) Course Name: Management and Entrepreneurship for IT Industry 17CS51

C301.1	Define management, organization, entrepreneur, planning, staffing, ERP and outline their importance in entrepreneurship
C301.2	Utilize the resources available effectively through ERP
C301.3	Make use of IPRs and institutional support in entrepreneurship

24) Course Name: Computer Networks 17CS52

C302.1	Explain principles of application layer protocols
C302.2	Outline transport layer services and infer UDP and TCP protocols
C302.3	Classify routers, IP and Routing Algorithms in network layer
C302.4	Explain the Wireless and Mobile Networks covering IEEE 802.11 Standard
C302.5	Define Multimedia Networking and Network Management

25) Course Name: Database Management System 17CS53

C303.1	Summarize the concepts of database objects; enforce integrity constraints on a database using RDBMS.
C303.2	Use Structured Query Language (SQL) for database manipulation.
C303.3	Design simple database systems
C303.4	Design code for some application to interact with databases.

26) Course Name: Automata Theory and Computability 17CS54

C304.1	Tell the core concepts in automata theory and Theory of Computation
C304.2	Explain how to translate between different models of Computation (e.g., Deterministic and Non-deterministic and Software models).
C304.3	Interpret Grammars and Automata (recognizers) for different language classes and become knowledgeable about restricted models of Computation (Regular, Context Free) and their relative powers.
C304.4	Develop skills in formal reasoning and reduction of a problem to a formal model, with an emphasis on semantic precision and conciseness.
C304.5	Classify a problem with respect to different models of Computation.

27) Course Name: Object Oriented Modelling and Design 17CS551

C3051.1	Describe the concepts of object-oriented and basic class modelling.
C3051.2	Draw class diagrams, sequence diagrams and interaction diagrams to solve problems.
C3051.3	Choose and apply a befitting design pattern for the given problem.

28) Course Name: Artificial Intelligence 17CS562

C3062.1	Identify the AI based problems
C3062.2	Apply techniques to solve the AI problems
C3062.3	Define learning and explain various learning techniques
C3062.4	Discuss expert systems

29) Course Name: Cryptography, Network Security and Cyber Law 17CS61

C311.1	Discuss cryptography and its need to various applications
C311.2	Design and develop simple cryptography algorithms
C311.3	Understand cyber security and need cyber Law

30) Course Name: Computer Graphics and Visualization 17CS62

C312.1	Design and implement algorithms for 2D graphics primitives and attributes.
C312.2	Illustrate Geometric transformations on both 2D and 3D objects.
C312.3	Apply concepts of clipping and visible surface detection in 2D and 3D viewing, and Illumination Models.
C312.4	Decide suitable hardware and software for developing graphics packages using OpenGL.

31) Course Name: System Software and Compiler Design 17CS63

C313.1	Explain system software such as assemblers, loaders, linkers and macroprocessors
C313.2	Design and develop lexical analyzers, parsers and code generators
C313.3	Utilize lex and yacc tools for implementing different concepts of system software

32) Course Name: Operating Systems 17CS64

C314.1	Demonstrate need for OS and different types of OS
C314.2	Discuss suitable techniques for management of different resources
C314.3	Illustrate processor, memory, storage and file system commands
C314.4	Explain the different concepts of OS in platform of usage through case studies

33) Course Name: Data Mining and Data Warehousing 17CS651

C3151.1	Understand data mining problems and implement the data warehouse
C3151.2	Demonstrate association rules for a given data pattern.
C3151.3	Discuss between classification and clustering solution.

34)Course Name: Python Application Programming 17CS664

C3164.1	Understand Python syntax and semantics and be fluent in the use of Python
C3164.2	Demonstrate proficiency in handling Strings and File Systems.
C3164.3	Implement Python Programs using core data structures like Lists,
C3164.4	Interpret the concepts of Object-Oriented Programming as used in Python.
C3164.5	Implement exemplary applications related to Network Programming, Web

34) Course Name: Web Technology and its applications17CS71

C401.1	Define HTML and CSS syntax and semantics to build web pages.
C401.2	Understand the concept of Construct, visually format tables and forms using HTML and CSS
C401.3	Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically.
C401.4	List the principles of object oriented development using PHP
C401.5	Illustrate JavaScript frameworks like jQuery and Backbone which facilitates developer to focus on core features.

35) Course Name: Advanced Computer Architectures 17CS72

C402.1	Demonstrate Parallel computing Concept.
C402.2	Develop and compare the parallel Architecture.
C402.3	Understand the concepts of parallel computing and its hardware technologies

36)Course Name: Machine Learning 17CS73

C403.1	Recall the problems for machine learning. And select the either supervised, unsupersvised or reinforcement learning.
C403.2	Understand theory of probability and statistics related to machine learning
C403.3	Illustrate concept learning, ANN, Bayes classifier, k nearest neighbor, Q

37) Course Name:Information and Network Security 17CS743

C4043.1	Analyze the Digitals security lapses
C4043.2	Illustrate the need of key management

38) Course Name: Storage Area Networks 17CS754

C4054.1	Identify key challenges in managing information and analyze different storagenetworking technologies and virtualization
C4054.2	Explain components and the implementation of NAS
C4054.3	Describe CAS architecture and types of archives and forms of virtualization
C4054.4	Illustrate the storage infrastructure and management activities

39) Course Name: Internet of Things and Applications 17CS81

C411.1	Interpret the impact and challenges posed by IoT networks leading to new architectural models.
C411.2	Compare and contrast the deployment of smart objects and the technologies to connect them to network.
C411.3	Appraise the role of IoT protocols for efficient network communication.
C411.4	Elaborate the need for Data Analytics and Security in IoT.
C411.5	Illustrate different sensor technologies for sensing real world entities and identify the applications of IoT in Industry

40) Course Name: Big Data Analytics 17CS82

C412.1	Explain the concepts of HDFS and MapReduce framework
C412.2	Investigate Hadoop related tools for Big Data Analytics and perform basic Hadoop Administration
C412.3	Recognize the role of Business Intelligence, Data warehousing and Visualization in decision making
C412.4	Infer the importance of core data mining techniques for data analytics
C412.5	Compare and contrast different Text Mining Techniques

41) Course Name: User Interface Design 17CS832

C4132.1	Design the user interface, design, menu creation and windows creation and connection between menu and windows

42) Course Name: System Modelling and Simulation 17CS834

C4134.1	Explain the system concept and apply functional modelling method to model theactivities of a static system
C4134.2	Describe the behaviour of a dynamic system and create an analogous model for adynamic system
C4134.3	Illustrate the operation of a dynamic system and make improvement according to the simulation results.