Training needs for the year 2024-25 **Annexure**

Branch : Civil Engineering

Sl.No.	Title of the Course proposed
CE01	Mechanical properties of materials
CE02	Surface protective materials, selection and applications of wood, plastics, glass and asbestos for construction works
CE03	Conduction of experiments in material testing Laboratory including tests on soils
CE04	Field exercises using total station
CE05	Study of pumps and turbines clubbed with field visit to dams
CE06	Design and detailing of RCC elements using IS 456 - 2000 (Limit State Design) and SP 16
CE07	Water management and watershed management
CE08	Energy management and energy audit in buildings
CE09	CAD practices
CE10	Analysis, design and drafting softwares –STADD/ETABS
CE11	Building construction practices
CE12	Design of steel structures by using IS 800 - 2007
CE13	Entrepreneurship development in Civil Engineering
CE14	Laboratory practices on soil testing
CE15	Smart technologies and electronic survey instruments
CE16	Prefabricated building technologies and solar energy utilisation in buildings
CE17	Leadership qualities development for HODs
CE18	General Administration
CE19	Meeting parameters for NBA accreditation for all staff
CE20	Purchase procedures and e procurement
CE21	GPS and Drone Technology
CE22	Project Management using software- MS Project

Branch: Mechanical Engineering Section

Sl No	TITLE OF THE COURSE PROPOSED
ME01	Smart Technologies
ME02	Six Sigma
ME03	CAD/CAM integration tools, Robotics
ME04	Laboratory skills related to Refrigeration & Air Conditioning
ME05	Laboratory skills related to Non Conventional Energy Sources
ME06	Laboratory skills related to Fuels Laboratory, Heat engines Laboratory
ME07	Laboratory skills related to Material Testing Laboratory
ME08	Laboratory skills related to Hydraulics and pneumatics
ME09	Workshop Skills enhancement to instructors
ME10	Workshop Skills enhancement to instructors
ME11	MAT Laboratory applications
ME12	Exposure to Modern Class Room Teaching
ME13	Modern Engineering Materials
ME14	Laboratory skills related to CNC Machines
ME15	CAM and Robotics
ME16	Testing Tools
ME17	Skills for newly promoted Heads and Principals
ME18	Orientation programme across different colleges
ME19	Research Methodology
ME20	Advanced Manufacturing Trends Viz., IOT, IIOT (particular to Mech domain), Lean Manufacturing and Smart Factory.
ME21	Greener Technologies and Safety awareness

Branch: Electrical & Electronics Engg

Sl.No.	Title of the Course proposed
EE01	Engineering drawing
EE02	Electrical engineering drawing
EE03	Modern techniques for electrical wiring systems and maintenance
EE04	Modern techniques for detailed estimation of electrical works
EE05	Maintenance of electrical machine Laboratorys and institutions
EE06	Conduct experiments, fault identification and rectification of three phase AC motors
EE07	Conduct experiments, fault identification and rectification of single phase AC & DC motors
EE08	Identification of terminals and faults of different motors
EE09	Speed control of AC & DC motor using SCRs (PLC)
EE10	Execute ladder diagrams with different starters, other models using LD programme & different logic gates
EE11	Potential requirement of electrical systems
EE12	Switch yard and generating station including field visit
EE13	Powergrid and load dispatching centers including field visit
EE14	Rural electrification systems
EE15	Detail estimation of electrical works using latest technologies
EE16	Electrical Engineering drawing using MAT Laboratory simulink
EE17	Leadership qualities development for HODs
EE18	General Administration
EE19	Meeting parameters for NBA accreditation for all staff
EE20	Purchase procedures and e procurement
EE21	Electric Vehicle Technology & Lithium-ion batteries
EE22	Switch gear protection, PLC & SCADA

Branch: Electronics & Communication Engg

Sl.No.	Title of the Course proposed
EC01	PCB Design & Prepation of electronic Circuits
EC02	Pspice
EC03	Programming in C & MATLABORATORY
EC04	Interfacing concepts of microcontroller 8051
EC05	Project/application Development using 8051 microcontroller
EC06	Computer Hardware & Networking
EC07	Advanced Networking concepts
EC08	Advanced mobile cellular communication concepts: 3G, 4G, 5G technologies
EC09	Microwave Laboratory
EC10	Fiber Optic Communication Laboratory
EC11	Industrial Electronics & PLC Laboratory
EC12	8086 programming & Interfacing
EC13	Python Programming
EC14	Digital Signal processing
EC15	Image Processing
EC16	Artificial Intelligence & Machine Learing
EC17	Research Methodologies
EC18	General administrative Procedures
EC19	Leadership training
EC20	ARM processors architecture, programming & applications
EC21	ARM processors interfacing and application development
EC22	Embedded systems design and development
EC23	Industry 4.0, IoT and Sensors
EC24	IoT system development using Arduino and Raspburry PI
EC25	4G and 5G Technologies
EC26	Battery maintenance in e-vehicles in electronics perspective

Branch: Computer science Engg

SNO	TITLE OF THE COURESE PROPOSED
CS01	Emerging trends in Computer Engg
CS02	Data Base Management System
CS03	Web Designing
CS04	Java Programming
CS05	Computer Hardware & Networking
CS06	System Administration
CS07	Software Testing
CS08	.NET Programming with C#
CS09	Mobile Application Development
CS10	Advanced Computer Technology
CS11	Data Structures through C
CS12	Cyber Security
CS13	Big Data
CS14	Cloud Computing
CS15	Android Programming

General Section

ENGLISH

Sl No	TITLE OF THE COURSE PROPOSED
EN01	Professional Ethics and Communication Skills for Educators
EN02	Professional Development in English Language Teaching
EN03	Creative Writing Workshops
EN04	Effective Teaching Strategies for English Language Learners
EN05	Digital Tools for Language Teaching:

MATHEMATICS

Sl No	TITLE OF THE COURSE PROPOSED
M01	MAT LABORATORY
M02	ENGLISH COMMUNICATION SKILLS AND LATEX (OPEN SOFTWARE)
M03	NUMERICAL APPROXIMATIONS USING MATLABORATORY
M04	ENGLISH COMMUNICATION SKILLS AND MATLABORATORY
M05	"PYTHAN (OPEN SOFTWARE)"
M06	ENGLISH COMMUNICATION SKILLS AND PYTHAN (OPEN SOFTWARE)

Physics

Sl No	TITLE OF THE COURSE PROPOSED
PH01	Optical Fibre Communication
PH02	Nano science – Nanotechnology - applications
PH03	Concepts of electricity and magnetism
PH04	Solar energy and emerging trends in modern life
PH05	Tutorial on physics Laboratory course
PH06	Latest trends in modern physics: RTMS
PH07	Superconductors

Chemistry

Sl No	TITLE OF THE COURSE PROPOSED
CH01	Green Chemistry and Nano materials
CH02	Biodegradable Polymers
CH03	Water Treatment Techniques
CH04	Current trends in Drug Chemistry
CH05	Computer aided Teaching in Chemistry
CH06	Research methodology in Chemistry
CH07	Vast applications of Chemistry in Engineering branches

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