2.6.1. Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website and attainment of POs and COs are evaluated
(SEM – V & VI – C – SCHEME)

2022 REGULATION-COURSE OUTCOMES

SEMESTER	COURSE CODE	COURSE NAME	COURSE ID	COURSE OUTCOME
V	EEC501	Electrical AC Machines –II	CO 1	To illustrate the working of synchronous generator
			CO 2	To determine the voltage regulation of synchronous generator by different methods
			CO 3	To analyze the parallel operation of synchronous generators
			CO 4	To apply Blondel's two reaction theory and solve simple problems on salient pole synchronous machines
			CO 5	To analyze the operation of synchronous motor
			CO 6	To derive the basic machine relations in dq0 variables for a synchronous machine without considering damper winding
V	EEC502	Electrical Power System I	CO 1	Understand and analyse unsymmetrical faults on transmission line
			CO 2	. Analyse symmetrical component and construct sequence network
			CO 3	Analyse symmetrical faults on transmission lines
			CO 4	Understand power system transients
			CO 5	Understand phenomenon of lightning and insulation coordination
			CO 6	Understand concept of corona
V	EEC503	Control Systems	CO 1	Demonstrate an understanding of the fundamentals of (feedback) control systems.
			CO 2	Determine and use models of physical systems in forms suitable for use in the analysis and design of control systems.
			CO 3	Express and solve system equations in state-variable form (state variable models).
			CO 4	Determine the time and

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				frequency-domain responses of first and second-order systems to step and sinusoidal (and to some extent, ramp) inputs
			CO 5	Determine the (absolute) stability of a closed-loop control system
V	**EEC504**	**Electromagnetic Field and Wave**	**CO 1**	Apply knowledge of mathematics and physics in electrical engineering field.
			CO 2	Analyze electrostatic fields
			CO 3	Apply and analyse magneto-static fields
			CO 4	Analyze the effect of material medium on electric and magnetic fields
			CO 5	Analyze and formulate time varying electric and magnetic fields
			CO 6	Formulate wave equations for Electromagnetic wave propagation in different media.
V	**EEDO5011**	**Renewable Energy Sources**	**CO 1**	Understand different types conventional energy sources and their reserves
			CO 2	Identify and analyse the process of power generation through solar thermal energy utilization
			CO 3	Identify and analyse the process of power generation through solar photovoltaic energy utilization
			CO 4	Identify and describe the various components and types of Wind Energy system
			CO 5	Identify and describe the basic operation and types of Fuel cell system
			CO 6	Understand different types of other non-conventional energy sources

SEMESTER	COURSE CODE	COURSE NAME	COURSE ID	COURSE OUTCOME
VI	**EEC601**	**Power System Protection and Switchgear**	**CO 1**	To select the appropriate switching/protecting device for substations. .
			CO 2	To discriminate between the application of circuit breaker and fuses as a protective device
			CO 3	To understand the basic concept of relay,

				types of relays and their applications in power system
			CO 4	To select the specific protection required for different components of power system according to the type of fault
			CO 5	To apply the specific protection provided for different types of transmission lines
VI	**EEC602**	**Microcontroller Applications**	**CO 1**	To analyse the difference between microprocessor and microcontroller based systems.
			CO 2	write, debug and execute the software programs for internal peripheral devices of microcontroller
			CO 3	To write, debug and execute the software programs for external peripheral devices for microcontroller-based systems
			CO 4	To design and implement the peripheral devices interfacing with microcontroller
VI	**EEC603**	**Control System Design**	**CO 1**	Define fundamental control system design specifications and basic principles of controller
			CO 2	Understand the basic design of various compensators
			CO 3	Design compensators using root locus techniques
			CO 4	Design modern controllers based on the state space techniques
			CO 5	Recognize the importance of observability and controllability for system design
VI	**EEC604**	**Signals and Systems**	**CO 1**	Discriminate continuous and discrete time signals and systems.
			CO 2	Understand the transformation of discrete time signal to Z domain
			CO 3	Analyse frequency response of systems using Z domain
			CO 4	Design, implementation, analysis and comparison of digital filters for processing of discrete time signals
VI	**EEDO6013**	**High Voltage Engineering**	**CO 1**	To know the fundamentals properties of the materials and their failure mechanisms to get appropriate and optimal design.
			CO 2	To explain and calculate the generation and measurement of High DC, AC and Impulse voltages and currents
			CO 3	To understand testing of High voltage power

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				apparatus
			CO 4	To illustrate the major requirements in design of HV Laboratories