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## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

SEM	SUBJECT CODE	SUBJECT NAME	COURSE ID	COURSE OUTCOME
			CO 1	Understand how to solve the given standard partial differential equations.
II	MA8353	TRANSFORMS AND PARTIAL	CO 2	Solve differential equations using Fourier series analysis which plays a vital role in engineeringapplications.
		DIFFERENTIAL EQUATIONS	CO 3	Appreciate the physical significance of Fourier series techniques in solving one and twodimensional heat flow problems and one dimensional wave equations.
	EE8351	DIGITAL LOGIC CIRCUITS	CO 1	Ability to design combinational and sequential Circuits.
			CO 2	Ability to introduce digital simulation for development of application oriented logic circuits.
			CO 3	Ability to introduce asynchronous sequential circuits and PLDs
II			CO 4	Ability to design various synchronous and asynchronous circuits.
			CO5	Ability to study various number systems and simplify the logical expressions using Boolean functions
			CO 6	Ability to simulate using software package.
			CO 1	Ability to understand the basic mathematical concepts related to electromagnetic vector fields.



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	DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING						
			CO 2	Ability to understand and compute Electromagnetic fields and apply			
				them for design and analysis of electrical equipment and systems			
			CO 3	Ability to understand the basic concepts electromagnetic waves and			
				characterizing parameters			
II	EE8391	ELECTROMAGNETIC	CO 4	Ability to understand the different methods of emf generation and			
		THEORY		Maxwell's equations			
			CO5	Ability to understand the different methods of emf generation and			
				Maxwell's equations			
			CO 6	Ability to acquire the knowledge in magneto static fields, magnetic flux			
				density, vector potential and its applications.			
			CO 1	Ability to analyze the magnetic-circuits.			
	EE8301	ELECTRICAL MACHINES – I					
			CO 2	Ability to acquire the knowledge in various losses taking place in D.C.			
				Machines			
			CO 3	Ability to acquire the knowledge in working principles of DC Motor			
111			CO 4	Ability to acquire the knowledge in working principles of DC Generator.			
			CO5	Ability to understand the concents of electromochanical energy			
			05	conversion			
			CO 6	Ability to acquire the knowledge in constructional details of			
			000	transformers			
			CO 1	Explain the structure and working operation of basic electronic devices.			
	EC9252	ELECTRON DEVICES AND					
III	EC8333	CIRCUITS	CO 2	Employ the acquired knowledge in design and analysis of oscillators			



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	DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING					
			CO 3	Choose and adapt the required components to construct an amplifier circuit.		
			CO 4	Analyze the characteristics of different electronic devices such as diodes and transistors		
			CO5	Able to identify and differentiate both active and passive elements		
			CO 1	Explain the layout, construction and working of the components inside a thermal power plant.		
		POWER PLANT ENGINEERING	CO 2	Explain the applications of power plants while extend their knowledge to power plant economics and environmental hazards and estimate the costs of electrical energy production.		
ш	ME8792		CO 3	Explain the layout, construction and working of the components inside Renewable energy power plants.		
			CO 4	Explain the layout, construction and working of the components inside nuclear power plants.		
			CO5	Explain the layout, construction and working of the components inside a Diesel, Gas and Combined cycle power plants.		
		NUMERICAL METHODS	CO 1	Understand the basic concepts and techniques of solving algebraic and transcendental equations.		
IV	MA8491		CO 2	Appreciate the numerical techniques of interpolation and error approximations in various intervals in real life situations.		
			CO 3	Apply the numerical techniques of differentiation and integration for engineering problems.		



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			CO 4	Solve the partial and ordinary differential equations with initial and
				boundary conditions by using certain techniques with engineering
				applications.
			CO5	Understand the knowledge of various techniques and methods for
		ļ		solving first and second order ordinary differential equations.
			CO 1	Ability to understand the construction and working principle of
				Synchronous Generator
			CO 2	Ability to predetermine the performance characteristics of Synchronous
				Machines.
			CO 3	Ability to understand the construction and working principle of Special
	EE8401	ELECTRICAL MACHINES – II		Machines
IV				
			CO 4	Ability to understand the construction and working principle of Three
				phase Induction Motor
			CO5	Ability to acquire knowledge on Synchronous motor
			005	Ability to acquire knowledge on Synchronous motor.
			CO 6	Ability to understand MMF curves and armature windings.
			ļ	
			CO 1	To understand the importance and the functioning of transmission line
IV				parameters.
		TRANSMISSION AND	$CO^2$	To become familiar with the function of different components used in
	EE8402	DISTRIBUTION		Transmission and Distribution levels of power system and modelling of
		Distriberien		these components.
			CO 3	To acquire knowledge on Underground Cabilitys



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	DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING					
			CO 4	To understand the importance of distribution of the electric power in power system.		
			CO5	To acquire knowledge on the performance of Transmission lines.		
			CO 6	To understand the concepts of Lines and Insulators.		
			CO 1	To acquire knowledge on Basic functional elements of instrumentation		
		MEASUREMENTS AND INSTRUMENTATION	CO 2	Ability to model and analyze electrical and electronic Instruments and understand the operational features of display Devices and Data Acquisition System.		
IV	EE8403		CO 3	To understand the concepts Various transducers and the data acquisition systems		
			CO 4	Ability to compare between various measurement techniques		
			CO5	To understand the concepts of Fundamentals of electrical and electronic instruments		
		LINEAR INTEGRATED CIRCUITS AND APPLICATIONS	CO 1	Ability to acquire knowledge in IC fabrication procedure		
			CO 2	Ability to understand and analyse, linear integrated circuits their Fabrication and Application.		
IV	EE8451		CO 3	To understand and acquire knowledge on the Applications of Op-amp		
			CO 4	Functional blocks and the applications of special ICs like Timers, PLL circuits, regulator Circuits.		



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	DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING					
			CO5	To understand the importance of Signal analysis using Op-amp based circuits.		
			CO 6	Ability to analyze the characteristics of Op-Amp		
			CO 1	Ability to develop various representations of system based on the knowledge of Mathematics, Science and Engineering fundamentals.		
			CO 2	Ability to design appropriate compensator for the given specifications.		
			CO 3	Ability to come out with solution for complex control problem.		
IV	IC8451	CONTROL SYSTEMS	CO 4	Ability to understand use of PID controller in closed loop system.		
			CO5	Ability to interpret characteristics of the system to develop mathematical model.		
			CO 6	Ability to do time domain and frequency domain analysis of various models of linear system.		
		POWER SYSTEM ANALYSIS	CO 1	Ability to model the power system under steady state operating condition		
			CO 2	Ability to model and analyze stability problems in power system		
V	EE8501		CO 3	Ability to understand and apply iterative techniques for power flow analysis		
			CO 4	Ability to model and carry out short circuit studies on power system		
			CO5	Ability to model and understand various power system components and carry outpower flow, short circuit and stability studies.		



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			CO 1	Ability to acquire knowledge in Addressing modes & instruction set of 8085 & 8051.			
			CO 2	Ability to develop the Microprocessor and Microcontroller based applications.			
			CO 3	Ability to write the assembly language programme.			
V	EE8551	MICROPROCESSORS AND MICROCONTROLLERS	CO 4	Ability to explain the architecture of Microprocessor and Microcontroller.			
			CO5	Ability to understand the importance of Interfacing			
			CO 6	Ability to need & use of Interrupt structure 8085 & 8051.			
V	EE8552	POWER ELECTRONICS	CO 1	Ability to analyse AC-AC and DC-DC and DC-AC converters.			
v			CO 2	Ability to choose the converters for real time applications			
		DIGITAL SIGNAL PROCESSING	CO 1	Ability to understand the importance of Fourier transform, digital filters and DS Processors.			
V	EE8591		CO 2	Ability to acquire knowledge on programmability digital signal processor & quantization effects			
v			CO 3	Ability to understand the types of filters and their design for digital implementation.			
			CO 4	Ability to analyze the transformation techniques & their computation.			



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			CO5	Ability to understand and analyze the discrete time systems.		
			CO 6	Ability to acquire knowledge on Signals and systems & their mathematical representation.		
			CO 1	Develop Java programs using OOP principles		
			CO 2	Develop interactive Java programs using swings		
v	CS8392	OBJECT ORIENTED PROGRAMMING	CO 3	Develop Java applications with threads and generics classes		
			CO 4	Build Java applications using exceptions and I/O streams		
			CO5	Develop Java programs with the concepts inheritance and interfaces		
	F8601	SOLID STATE DRIVES	CO 1	Ability to understand and suggest a converter for solid state drive.		
			CO 2	Ability to analyze and design the current and speed controllers for a closed loop solid state DC motor drive.		
771			CO 3	Ability to analyze the operation and performance of AC motor drives.		
VI	20001		CO 4	Ability to analyze the operation of the converter/chopper fed dc drive.		
			CO5	Ability to study about the steady state operation and transient dynamics of a motor load system.		
			CO 6	Ability to select suitability drive for the given application.		
VI	EE8602	PROTECTION AND SWITCHGEAR	CO 1	Ability to understand and analyze Electromagnetic and Static Relays.		



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			CO 2	Ability to analyze the characteristics and functions of relays and			
				protection schemes.			
			CO 3	Ability to acquire knowledge on functioning of circuit breaker			
			CO 4	Ability to suggest suitability circuit breaker.			
			CO5	Ability to study about the apparatus protection, static and numerical relays.			
			CO 6	Ability to find the causes of abnormal operating conditions of the apparatus and system.			
			CO 1	Ability to understand and analyze Embedded systems.			
	EE8691	EMBEDDED SYSTEMS	CO 2	Ability to understand basics of Real time operating system.			
VI			CO 3	Ability to acquire knowledge on various processor scheduling algorithms.			
			CO 4	Ability to study about the bus Communication in processors.			
			CO5	Ability to operate various Embedded Development Strategies			
			CO 6	Ability to suggest an embedded system for a given application.			
			CO 1	Ability to understand Transients in power system.			
VII	EE8701	HIGH VOLTAGE ENGINEERING	CO 2	Ability to test power apparatus and insulation coordination			
V 11			CO 3	Ability to measure over voltages			



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	DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING					
			CO 4	Ability to understand various types of over voltages in power system.		
			CO5	Ability to understand High voltage testing.		
			CO 6	Ability to understand Generation and measurement of high voltage.		
			CO 1	Ability to understand the day-to-day operation of electric power system		
			CO 2	Ability to design SCADA and its application for real time operation.		
		POWER SYSTEM OPERATION AND CONTROL	CO 3	Ability to understand the reactive power-voltage interaction.		
VII	EE8702		CO 4	Ability to acquire knowledge on real power-frequency interaction.		
			CO5	Ability to understand the significance of power system operation and control.		
			CO 6	Ability to analyze the control actions to be implemented on the system to meet the minute-to-minute variation of system demand.		
			CO 1	Ability to create awareness about renewable Energy Sources and		
VII	EE8703	RENEWABLE ENERGY SYSTEMS	CO 2	technologies. Ability to get adequate inputs on a variety of issues in harnessing renewable Energy.		
			CO 3	Ability to recognize current and possible future role of renewable energy sources.		
			CO 4	Ability to explain the various renewable energy resources and technologies and their applications.		



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	CO5	Ability to understand basics about biomass energy.
	CO 6	Ability to acquire knowledge about solar energy.