

FOURTH YEAR FIRST SEMESTER

Course Code & Title	Course Outcomes
A70231&SWITCH GEAR AND PROTECTION	CO1: Apply the electromechanical energy conversion principles for the protection of power system equipments through relay and circuit breakers.
	CO2: Explain working of Electromagnetic, static relays and circuit breakers in a power system.
	CO3: Propose suitable protection schemes for different electrical equipment against different faults.
	CO4: Understand Neutral grounding techniques with Resistance , Reactance in a power system.
	CO5: Evaluate the influence of over voltages and over currents to understand the Insulation coordination and Basic Impulse Insulation Level in power systems.
A70231&UTILIZATION OF ELECTRICAL ENERGY.	CO1: List the methods of electric drives and suggest a suitable motor for each drive.
	CO2: Analyse various methods of Electric heating and Electric welding.
	CO3: Estimate the number and wattage of illuminating lamp to obtain desired intensity of illumination on a given working surface.
	CO4: Draw speed time curves for trapezoidal and quadrilateral services.
	CO5: Calculate tractive effort, power , specific energy consumption for given train movement.
A70421&DIGITAL SIGNAL PROCESSING	CO1: 1. Understand the characteristics of continuous time and discrete time signals and systems.
	CO2: 2. Analyze signals using discrete Fourier series, discrete Fourier transform and fast Fourier transform.
	CO3: 3. Design of IIR & FIR filters.
	CO4: 4. Understand the applications of digital signal processing including military,medical,speech processing.
	CO5: 5. Distinguish the tradeoff between normal and multirate DSP techniques.
	CO1: Dispatch the load economically among thermal plants.
	CO2: Understand the Optimal Scheduling of Hydro Thermal system.
	CO3: Design Power System Components such as Governor,Turbine and Generator-Load, Excitation systems.

A70230&POWER SYSTEMS OPERATION AND CONTROL	CO4: Design simple architectures for single area load frequency control and two area load frequency control.
	CO5: Illustrate the significance of reactive power compensation.
A70232&VLSI DESIGN	CO1: Apply the fabrication steps and manufacturing technologies used in ICs.
	CO2: Design the MOS, CMOS logic gates using stick, layout diagrams.
	CO3: Estimate sheet resistance, capacitance and delay for MOS logics .
	CO4: Design different sub systems designs used in digital systems.
	CO5: Gain the knowledge on different design tools and CMOS testing.
A70227 ELECTRICAL ESTIMATION AND COSTING	CO1: To prepare an estimate of quantity and cost of the material for an electrical project
	CO2: To Prepare detail estimate and costing of Residential and commercial Electrical Installations.
	CO3: To Test Residential, commercial and Industrial Electrical Installation.
	CO4: To Prepare detail estimate and costing of a transmission line/Overhead and underground.
	CO5:To prepare estimates for repairs and maintenance of electrical devices and equipment.
A70498&MP&ID LAB	CO1: Develop various Arithmetic operations in 8086.
	CO2: Develop various Logical operations in 8086.
	CO3: Interface various peripherals like 8255,8279,8251 etc .
	CO4: Interface various devices like DAC, stepper motor etc .
A70293&EMS LAB	CO1: To calibrate LPF Watt Meter, energy meter, P. F Meter using electro dynamo meter type instrument as the standard instrument.
	CO2: To determine unknown inductance, resistance, capacitance by performing experiments on D.C Bridges & A. C Bridges.
	CO3: To determine three phase active & reactive powers using single wattmeter method practically.
	CO4: To determine the ratio and phase angle errors of current transformer and potential transformer.
	CO5: find the accuracy of any instrument by performing experiment .