



## Course Outcome of VII th- sem of Electrical engineering

### SEMISTER:- VII TH SEM (IVTH YR)

**Course Title : ELECTRICAL ENERGY DISTRIBUTION & UTILIZATION (EEDU)**  
**Course Code : 7EE01**

CO 1	Demonstrate the knowledge of distribution substation
CO 2	Compare different power distribution systems
CO 3	Describe elements of distribution Automation system
CO 4	Select proper electrical drive for industrial applications
CO 5	Explain the working of electric traction system
CO 6	Describe an illumination system & electric heating

**Course Title : DIGITAL SIGNAL PROCESSING(DSP)**  
**Course Code : 7EE02**

CO 1	Analyze the discrete time signals in time domain.
CO 2	Analyze the discrete time systems using DTFT and DFT
CO 3	Apply the concept of Bandpass sampling.
CO 4	Design the structures of different types of digital filters.



CO 5	Analyze the frequency response of various digital filters
CO 6	Apply the knowledge of multi-rate signal processing.

**Course Title : ENTREPRENEURSHIP AND PROJECT MANAGEMENT(EPM)**

**Course Code : 7EE03**

CO 1	Understand the concept of entrepreneurship and its role in economic development.
CO 2	Compare the various business models and select the most suitable.
CO 3	Identify & formulate the project report and Source of finance for a project.
CO 4	Estimate the cost, time & resources for the project work

**Course Title : PE-III WIND AND SOLAR SYSTEMS(WSS)**

**Course Code : 7EE04**

CO 1	Understand the energy scenario and the consequent growth of the power generation from renewable energy sources.
CO 2	Understand the basic physics of wind and solar power generation.
CO 3	Understand the power electronic interfaces for wind and solar generation.



CO 4	Understand the issues related to the grid-integration of solar and wind energy systems
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**Course Title : PE-III VLSI DESIGN(VLSI)**

**Course Code : 7EE04**

CO 1	Identify the various IC fabrication methods
CO 2	Express the Layout of simple MOS circuit using Lambda based design rules.
CO 3	Apply the Lambda based design rules for subsystem design.
CO 4	Differentiate various FPGA architectures. CO5: Design an application using Verilog HDL.
CO 5	Concepts of modelling a digital system using Hardware Description Language

**Course Title : PE-III Computer Architecture & Organization(CAO)**

**Course Code : 7EE04**

CO 1	Differentiate Von Neumann, Harvard, and CISC and RISC architectures. Analyze the performance of machines with different capabilities.
CO 2	Illustrate binary format for numerical and characters. Validate efficient algorithm for arithmetic operations.
CO 3	Construct machine level program for given expression on n-address machine. Analyze and calculate memory traffic for a program execution. Design an efficient data path for an instruction format for a given architecture.



CO 4	Explain the importance of hierarchical memory organization. Able to construct larger memories. Analyze and suggest efficient cache mapping technique and replacement algorithms for given design requirements. Demonstrate hamming code for error detection and correction.
CO 5	techniques. Describe and Differentiate different modes of data transfer. Appraise the synchronous and asynchronous bus for performance and arbitration
CO 6	Understand the structure and read write mechanisms for different storage systems. Illustrate and suggest appropriate use of RAID levels. Assess the performance of IO and external storage systems.
CO 7	Classify parallel machine models. Illustrate typical 6-stage pipeline for overlapped execution. Analyse the hazards and solutions

**Course Title : PE-IV ARTIFICIAL INTELLIGENCE(AI)**

**Course Code : 7EE05**

CO 1	To understand and communicate fundamentals of Artificial Neural Networks and Systems.
CO 2	To understand and present various learning methods and architectures of neural network.
CO 3	To understand and describe fuzzy logic and genetic algorithm fundamentals and be able to solve problems.
CO 4	To apply AI techniques to solve electrical engineering problems along with inter disciplinary problems.

**Course Title : PE-IV ELECTRICAL DRIVES & CONTROL(EDC)**

**Course Code : 7EE05**

CO 1	Explain the basic Concept of electrical drives
CO 2	Demonstrate various modern speed, torque control techniques of DC drives



CO 3	Demonstrate various modern speed, torque control techniques of AC drives.
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**Course Title : PE-IV DIGITAL CONTROL SYSTEMS(DCS)**

**Course Code : 7EE05**

CO 1	Discretize the continuous system
CO 2	Analyze the response of the system.
CO 3	Analyze the stability of the system
CO 4	controllability/ observability of a system
CO 5	Discretize the analog controller/ compensator
CO 6	Design the state feedback control law.
CO 7	Design the estimator for the given system.
CO 8	Design a component or a product applying all the relevant standards with realistic constraints