

DRONACHARYA

College of Engineering

Khentawas, Farrukh Nagar, Gurugram, Haryana

Approved by: All India Council for Technical Education (AICTE), New Delhi

Affiliated to: Gurugram University, Gurugram

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2023-24

SEMESTER VIth

POWER SYSTEM-II (PCC- EE-302G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Use numerical methods to analyse a power system in steady state.
(CO2)	Understand stability constraints in a synchronous grid.
(CO3)	Understand methods to control the voltage, frequency and power flow
(CO4)	Understand the basics of power system economics

Digital Signal Processing (PCC-EEE-306G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Use concepts of trigonometry, complex algebra, Fourier transform, z-transform to analyze the operations on signals and acquire knowledge about Systems
(CO2)	Select proper tools for analog-to-digital and digital-to-analog conversion. Also select proper tools for time domain and frequency domain implementation.
(CO3)	Design, implementation, analysis and comparison of digital filters for processing of discrete time signals
(CO4)	Integrate computer-based tools for engineering applications
(CO5)	Employ signal processing strategies at multidisciplinary team activities.
(CO6)	Assess the techniques, skills, and modern engineering tools necessary for analysis of different electrical signals and filtering out noise signals in engineering practice. Also develop creative and innovative designs that achieve desired performance criteria within specified objectives and constraints, understand the need for lifelong learning and continuing professional education

VLSI DESIGN (PCC -EEE-310G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Identify the various IC fabrication methods.
(CO2)	Express the Layout of simple MOS circuit using Lambda based design rules.
(CO3)	Apply the Lambda based design rules for subsystem design
(CO4)	Differentiate various FPGA architectures.
(CO5)	Design an application using Verilog HDL.
(CO6)	Concepts of modeling a digital system using Hardware Description Language.

Electrical and hybrid vehicle (PEC-EE-04G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Explain the basics of electric and hybrid electric vehicles, their architecture, technologies and fundamentals
(CO2)	Analyse the use of different power electronics devices and electrical machines in hybrid electric vehicles
(CO3)	Explain the use of different energy storage devices used for hybrid electric vehicles, their technologies and control and select appropriate technology
(CO4)	Interpret working of different configurations of electric vehicles and its components, hybrid vehicle configuration, performance analysis and Energy Management strategies in HEVs.

Power system protection (PEC-EE-06G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Understand the different components of a protection system.
(CO2)	Evaluate fault current due to different types of fault in a network.
(CO3)	Understand the protection schemes for different power system components.
(CO4)	Understand the basic principles of digital protection.

(CO5)	Understand system protection schemes, and the use of wide-area measurements.
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Advance Electric Drives (PEC-EE-08G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Understand the operation of power electronic converters and their control strategies.
(CO2)	Understand the vector control strategies for ac motor drives
(CO3)	Understand the implementation of the control strategies using digital signal processors.

ELECTRICAL MACHINE DESIGN (PEC-EE-10G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	To understand the specified limits for Specific electric and magnetic loading.
(CO2)	To understand about magnetic current of transformer and rotating machine.
(CO3)	To understand the basic design procedure for transformer, d.c. machine, induction motor and synchronous machine individually.
(CO4)	To explain the complete detailed design of all static and rotating machine and their performance with problems.
(CO5)	To understand about the computerization of the design procedure.
(CO6)	Analyze the design procedure and performance of various algorithms.

Python Programming (OEC-EE-04G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	For a given conceptual problem student will able to analyze the problem and write a program in python with basic concepts.
(CO2)	For a given problem of Strings and texts, student will able to analyze the problem and write a program in python with basic concepts involving strings and texts.
(CO3)	The knowledge of list and dictionary will enable student to implement in python language and analyze the same.
(CO4)	Student will able to write a program using functions to implement the basic concepts of object oriented programming language

Introduction to MEMS (OEC-EE-06G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Be introduced to the field of micro/nanosystems
(CO2)	Grain a knowledge of basic approaches for micro/nanosystem design
(CO3)	Gain a knowledge of state-of-the-art lithography techniques for micro/nanosystems
(CO4)	Learn new materials, science and technology for micro/nanosystem applications
(CO5)	Understand materials science for micro/nanosystem applications
(CO6)	Understand state-of-the-art micromachining and packaging technologies

Conventional and Renewable Energy Resources (OEC-EE-08G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Understand the need of energy conversion and the various methods of energy storage
(CO2)	Explain the field applications of solar energy
(CO3)	Identify Winds energy as alternate form of energy and to know how it can be tapped
(CO4)	Explain bio gas generation and its impact on environment
(CO5)	Understand the Geothermal &Tidal energy, its mechanism of production and its applications
(CO6)	Illustrate the concepts of Direct Energy Conversion systems & their applications.

Soft Computing (OEC-EE-10G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	To understand the concepts of soft computing vis-à-vis hard computing
(CO2)	To introduce the ideas of fuzzy logic, neural networks, genetic algorithm.

(C03)	To introduce the concepts of hybrid intelligent systems
(C04)	To introduce application areas of soft computing and the criteria to select appropriate soft computing