

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 VII

Power Management (PEC-EE-401G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Know about the present power scenario of India.
(CO2)	Know about the general layout of various engineering equipments.
(CO3)	Know theoretically and practically about power utilities of Haryana.
(CO4)	Know about various risks and hazards in the concern area.

Electrical Engineering Drawing (PEC-EE-403G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Understand the basic design and drawing for armature, transformer, d.c. machine, induction motor and synchronous machine and substation individually.
(CO2)	Understand the complete detailed design of all static and rotating machines and their performance with problems
(CO3)	Understand to analyze the design procedure and performance of various algorithms.

Utilization of Electrical Power (PEC- EE-405G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	To understand the operating principles and characteristics of traction motors with respect to speed, temperature, loading condition
(CO2)	To acquaint with the different types of heating and welding techniques
(CO3)	To study the basic principles of illumination and its measurement
(CO4)	To understand the basic principle of electric traction including speed time curves of different traction services

Advanced Power Electronics (PEC-EE-407G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Theoretical and practical knowledge on modern day semiconductor devices, their characteristics and control.
(CO2)	Understanding operation and analysis of switched mode DCDC converters and their designing.
(CO3)	Knowledge of power conditioners and their application
(CO4)	Working knowledge of static applications of advanced power electronics like UPS, HVDC, Automotive etc.

Power Systems Planning and Reliability (PEC- EE-409G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Understand the concept of power system planning
(CO2)	Evaluate the peak demand and energy requirements of system using forecasting techniques.
(CO3)	Understand concepts of Reliability Evaluation of generation , distribution system.

Modeling and analysis of Electrical Machines (PEC-EE-411G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Understand the basic principle and operation analysis of rotating machines.
(CO2)	Understand the complete operation of rotating machines and their performance evaluation with problems
(CO3)	Understand and analyze the various reference frame and algorithms for electrical machines

Microcontroller Based System Design (PEC- EE-413G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	To understand and apply computing platform and software for engineering problems.
(CO2)	To understand ethical issues, environmental impact and acquire management skills.

Advanced Power Transmission (PEC- EE-415G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Discuss Modeling of the transmission line parameters
(CO2)	Explain the equivalent circuits for the transmission lines based on distance and determine voltage regulation and efficiency.
(CO3)	To deal with the importance of HVDC Transmission and HVDC Converters
(CO4)	Knowledge of Modern power controllers to enhance the stability and capability of existing network.
(CO5)	Monitoring and improvement of Power Quality

Computer Aided Power System Analysis (PEC- EE-417G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	To understand the solution methods and techniques used in power system studies

Intelligent Systems and Control (OEC-EE-401G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Know about the basics approaches to intelligent controls.
(CO2)	Know about basics and working of various types of fuzzy based controllers.
(CO3)	Familiar to the basics and the practical implementations of the neural networks.
(CO4)	Know about importance of the optimization techniques.

Renewable Energy and Distributed Generation (OEC-EE-403G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Understand about renewable energy.
(CO2)	Understand the working of distributed generation system in autonomous/grid connected modes.
(CO3)	Know the Impact of Distributed Generation on Power System.

Traffic Engineering and Road Safety (OEC-CE- 448G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	To realize the significance of traffic engineering in today life.
(CO2)	To understand the processes involved in traffic studies.

(CO3)	To appreciate the role of Traffic regulations.
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QUALITY ENGINEERING (OEC-ME-410G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Attain the basic techniques of quality improvement, fundamental knowledge of statistics and probability
(CO2)	Use control charts to analyze for improving the process quality.
(CO3)	Describe different sampling plans
(CO4)	Acquire basic knowledge of total quality management
(CO5)	Understand the modern quality management techniques

SOLAR PHOTOVOLTAIC TECHNOLOGY (OEC- EE-407G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	To explain basics of solar photovoltaic systems.
(CO2)	To know in depth of its types and design of various PV-interconnected systems.

Energy Conservation and Management (OEC- EE-409G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	understand the basic knowledge of different terms & principles of energy conservation, audit and management.
(CO2)	Evaluate the energy saving & conservation in different mechanical utilities.
(CO3)	understand efficient heat & electricity utilization, saving and recovery in different thermal and electrical system.
(CO4)	prepare energy audit report for different energy conservation instances.

Disaster Management (OEC-CE- 450G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	To know natural as well as manmade disaster and their extent and possible effects on the economy.
(CO2)	To Plan national importance structures based upon the previous history.
(CO3)	To acquaint with government policies, acts and various organizational structures associated with an emergency.
(CO4)	To know the simple dos and don'ts in such extreme events and act accordingly.

Electronic Principles (OEC-ECE-451-G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Understand the working of electronic components.
(CO2)	Understand the Digital System and various displays.

Advanced Engineering Mathematics (OEC-MATH-405G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Estimate the actual complexity of the Linear programming Problems (LPP) and NonlinearLPP.
(CO2)	Explain the main principles for constructing the optimal methods for solving different types of minimization problems.
(CO3)	Experience in solving difficult Linear programming Problems (LPP) and NonlinearLPP
(CO4)	Experience to apply the various useful statistical test of the hypothesis testing of real-world problems.

Computer Communication (OEC-CSE-430G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Independently understand basic computer network technology.
(CO2)	Understand and explain Data Communications System and its components.
(CO3)	Identify the different types of network topologies and protocols.
(CO4)	Enumerate the layers of the OSI model and TCP/IP. Explain the function(s) of each layer.
(CO5)	Identify the different types of network devices and their functions within a network.

FUNDAMENTALS OF MANAGEMENT (HSMC-08G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Evolution of Management and contribution of Management thinkers.
(CO2)	Importance of staffing and training
(CO3)	The concept of material management and inventory control
(CO4)	The components of marketing and advertising
(CO5)	Various sources of finance and capital structure

Project stage-1 (PROJ-EE-423G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Develop the professional quality of employing technical knowledge obtained in the field of Engineering & Technology
(CO2)	Design and make analysis augmented with creativity, innovation and ingenuity.
(CO3)	Develop an understanding on how to work in actual industry environment.

(CO4)	Utilise the technical resources and write the technical report.
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