

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 MECHANICAL ENGINEERING

ACADEMIC YEAR 2023-24

SEMESTER VIth

Manufacturing Technology-II (PCC-ME -302G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Acquire knowledge about mechanics of chip formation and to identify the factors related to tool wear and machinability
(CO2)	Learn about different gear manufacturing and gear finishing operations.
(CO3)	Select the proper cutting tool material and components of jigs and fixtures.
(CO4)	Understand the basics principles of non-conventional machining processes and their applications.
(CO5)	Identify and select different measuring instruments for the inspection of different components.

DESIGN OF MACHINE ELEMENT-I (PCC-ME -304G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Exploration of different concepts & considerations of machine design.
(CO2)	Understanding design of different types of mechanical joints.
(CO3)	Learning of design of different types of keys & couplings.
(CO4)	Design procedure of transmission of shafts.
(CO5)	Design of different types springs.

HEAT TRANSFER (PCC-ME -306G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Understand the basic concept of conduction, convection and radiation heat transfer.
(CO2)	Formulation of one dimension conduction problems.
(CO3)	Application of empirical correlations for both forced and free convection for determines the value of convection heat transfer coefficient.
(CO4)	Expedite basic concept of the radiation heat transfer for black and grey body.
(CO5)	Learning of thermal analysis and sizing of Heat exchangers.

DYNAMICS OF MACHINES (PCC-ME -308G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Understand the Static and Inertia Force Analysis.
(CO2)	Explore the concept of Balancing of rotating and reciprocating masses.
(CO3)	Knowledge of concept of Mechanical Governor.
(CO4)	Develop the concept of Gyroscope and its application.
(CO5)	explore the concept of Mechanical Vibration.

WORKSHOP LAB –I (LC-ME -310G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	vapour power cycles and find and compare different cycles based on their performance parameters and efficiencies
(CO2)	steam boilers, their types and components.
(CO3)	fundamentals of flow of steam through a nozzle.
(CO4)	steam turbines and can calculate their work done and efficiencies.
(CO5)	types and working of condensers and compressors and define their different types of efficiencies

WORKSHOP LAB –II (LC-ME -312G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Understand the how to prepare the graph between bhp, ihp, fhp vs speed by using variable compression test rig
(CO2)	Knowledge of functions of 4 stroke and two stroke engines.
(CO3)	Learn Combustion System of IC Engines with Lubrication and Cooling system.
(CO4)	Familiarization of the pollution control system.

HEAT TRANSFER LAB (LC-ME-314G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Understanding the conduction heat transfer coefficient.
(CO2)	Design and analyze heat transfer system with practical demonstration.
(CO3)	Selection of equipments and their practical demonstration in heat transfer design.
(CO4)	Knowledge of development about mass transfer

DYNAMICS OF MACHINE LAB (LC-ME-316G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Understand the various practical demonstrations of forces in mechanism.
(CO2)	Knowledge of various Design features of mechanism with practical demonstration.
(CO3)	Learning the Special purpose mechanism (governor, Gyroscope Cam and followers etc) used in designing of a machine
(CO4)	Prepare practical model using the various linkages.

INTERNAL COMBUSTION ENGINES & GAS TURBINES (PEC-ME -320G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Understand the Air Standard Cycles with their applications.
(CO2)	Understand the Air Standard Cycles with their applications.
(CO3)	Conceptualize Combustion System of IC Engines.
(CO4)	Knowledge of Lubrication and Cooling systems and fuel cells.
(CO5)	Analyses the gas turbines.

WELDING TECHNOLOGY (PEC-ME -322G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Lay down Principles and applications of oxyacetylene and electric arc welding.
(CO2)	Understand various types of weld testing.
(CO3)	Have Knowledge of techniques of welding automation.
(CO4)	Describe methods of advanced and special welding processes. Course Contents

AIRCRAFT TECHNOLOGY (PEC-ME -324G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Explore principles of flight and the basic thermodynamics involved.
(CO2)	Have knowledge of Propulsion fundamentals and application of gas turbine system in aircraft.
(CO3)	Understand aerodynamics, different aircraft systems, inspection and maintenance.
(CO4)	Explore different aviation systems along with fighter crafts.

RELIABILITY, AVAILABILITY & MAINTAINABILITY (PEC-ME -326G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Evaluate the reliability of a system and its subcomponents
(CO2)	Gain the necessary knowledge about failure distributions and apply failure maintenance techniques
(CO3)	Perform reliability analysis of a system and designing the same CO 4 Estimate systems availability and maintainability,
(CO4)	Develop the Markov model for the mechanical systems.

ORGANIZATIONAL BEHAVIOUR (HSMC-02G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Students will be able to apply the managerial concepts in practical life.
(CO2)	The students will be able to understand the concept of organizational behavior at individual level and interpersonal level.
(CO3)	Students will be able to understand the behavioral dynamics in organizations.
(CO4)	Students will be able to understand the organizational culture and change.

HUMAN RESOURCE MANAGEMENT (HSMC-04G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	To develop the understanding of the concept of human resource management and to understand its relevance in organizations.
(CO2)	To develop necessary skill set for application of various HR issues.
(CO3)	To analyse the strategic issues and strategies required to select and develop manpower resources
(CO4)	To integrate the knowledge of HR concepts to take correct business decisions.

INDUSTRIAL PSYCHOLOGY (HSMC-06G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(CO1)	Describe major topics and subspecialties including critical theory and research finding that have defined the field of I/O psychology
(CO2)	Describe the complicated systems of individual and group psychological processes involved in the world of work
(CO3)	Connect the basic principles of I/O psychology to personnel and human resources management within the organization
(CO4)	Describe the ways in which individual career choices and work-lefe success can be improved through the benefits of I/O psychology
(CO5)	Use APA style writing and to enhance psychological writing

FUNDAMENTALS OF MANAGEMENT (HSMC-08G)

CourseOutcome(CO)	DetailsofCourseOutcomes
(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