

**DEPARTMENT OF MECHANICAL ENGINEERING
COURSE OUTCOME OF ALL COURSES OF SEVENTH SEMESTER**

COURSE NAME: Operation Research Techniques

COURSE CODE: 8ME01

CO1	Apply graphical and simplex methods to solve Linear Programming (LP) problems.
CO2	Apply Transportation Models and Assignment Models to determine optimal solutions.
CO3	Analyze PERT and CPM Network Models to assess project timelines and resource efficiency.
CO4	Solve waiting line and sequencing models to determine optimal solution.
CO5	Solve Simulation and Dynamic Programming problems for optimal strategies.
CO6	Apply replacement models for individual and group policies.

COURSE NAME: I.C. Engines

COURSE CODE: 8ME02

CO1	Analyze the various performance parameters of IC engines by using principles of thermodynamics.
CO2	Compare the major fuel groups for IC engines
CO3	Explain the normal & Abnormal combustion processes in SI and CI engines
CO4	Identify relevance of environment and emissions from IC engine

COURSE NAME: Production Planning & Control

COURSE CODE: 8ME03

CO1	Understand the importance of production planning and control, its functions and advantages.
CO2	Apply the skills of calculating for sales forecasts using various forecasting methods
CO3	Formulate production order and Production Plan for given batch size
CO4	Explain concept of machine capacity, loading of machines man machine activity charts.
CO5	Explain concept of inventory control & various cases of inventory system
CO6	Apply the modern philosophies of management like CIM, JIT, MRP-I and MRP-II.

COURSE NAME: Artificial Intelligence

COURSE CODE: 8ME03

CO1	Illustrate the concept of knowledge and knowledge base.
CO2	Explain the structure and working of an Expert System.
CO3	Illustrate the methods of knowledge representation.
CO4	Explain the design pre-requisites and design procedure of expert system
CO5	Explain the skills of development of expert system for industrial problems
CO6	Illustrate the concept of fuzzy logic and fuzzy engineering.

COURSE NAME: Refrigeration & Air Conditioning

COURSE CODE: 8ME04

CO1	Analyze the effect of different parameters on performance of Vapour Compressor Refrigeration System (VCR) with different types of refrigerant.
CO2	Analyze the elementary treatment of multistage pressure system along with fundamental of cryogenics engineering.
CO3	Explain various components of refrigeration system and applications including leak detection.
CO4	Apply the use of psychometric chart in the design of air-conditioning systems.
CO5	Illustrate the details Classification of air conditioning systems & its its applications
CO6	Analyze cooling load for different Air Conditioning System

COURSE NAME: Robotics & Industrial Applications

COURSE CODE: 8ME04

CO1	Explain the concept of robotics and its applications.
CO2	Illustrate robot anatomy and various configurations for different industrial applications.
CO3	Apply the concept of kinematic analysis of robots.
CO4	Apply the concept robot programming, its methods and programming languages.

COURSE NAME: Project

COURSE CODE: 8ME07

CO1	Analyze relevant literature and define a research problem with well-formulated objectives.
CO2	Plan and execute the project using appropriate methodologies and systematic work distribution.
CO3	Demonstrate technical proficiency through structured presentations, demonstrations, and effective communication.
CO4	Interpret and analyze feedback, refine project implementation, and present meaningful results and conclusions.
CO5	Exhibit professional ethics, teamwork, and project documentation skills through effective report writing and participation in research dissemination activities.