MANAV SCHOOL OF ENGINEERING & TECHNOLOGY
Approved by AICTE New Delhi, Affiliated to SGBAU (DTE Code : 1276)
Akola-Khamgaon NH 6, Vyala, Tal: Balapur, Dist.: Akola.
Email: mkct.engg@gmail.com Website : www. mkct.org.in

8ME01   Operation Research Techniques

After successfully completing the course, students will be able to:

1 Apply graphical and simplex methods to solve Linear Programming (LP) problems.

2 Apply Transportation Models and Assignment Models to determine optimal solutions.

3 Analyze PERT and CPM Network Models to assess project timelines and resource efficiency.

4 Solve waiting line and sequencing models to determine optimal solution.

5 Solve Simulation and Dynamic Programming problems for optimal strategies.

6 Apply replacement models for individual and group policies.

8ME02   I.C. Engines

After successfully completing the course, students will be able to:

1 Analyze the various performance parameters of IC engines by using principles of thermodynamics.

2 Compare the major fuel groups for IC engines

3 Explain the normal & Abnormal combustion processes in SI and CI engines

4 Identify relevance of environment and emissions from IC engine

8ME03   Production Planning & Control

After successfully completing the course, students will be able to:

1 Understand the importance of production planning and control, its functions and advantages.

2 Apply the skills of calculating for sales forecasts using various forecasting methods.

3 Formulate production order and Production Plan for given batch size

4 Explain concept of machine capacity, loading of machines man machine activity charts.

5 Explain concept of inventory control & various cases of inventory system

6 Apply the modern philosophies of management like CIM, JIT, MRP-I and MRP-II.

8ME03   Artificial Intelligence
After successfully completing the course, students will be able to:

1 Illustrate the concept of knowledge and knowledge base.

2 Explain the structure and working of an Expert System.

3 Illustrate the methods of knowledge representation.

4 Explain the design pre-requisites and design procedure of expert system

5 Explain the skills of development of expert system for industrial problems.

6 Illustrate the concept of fuzzy logic and fuzzy engineering.

8ME04   Refrigeration & Air Conditioning
After successfully completing the course, students will be able to:

1 Analyze the effect of different parameters on performance of Vapour
  Compressor Refrigeration System (VCR) with different types of refrigerant.

2 Analyze the elementary treatment of multistage pressure system along with
  fundamental of cryogenics engineering.

3 Explain various components of refrigeration system and applications including leak
  detection.

4 Apply the use of psychometric chart in the design of air-conditioning systems.

5 Illustrate the details Classification of air conditioning systems & its its applications.

6 Analyze cooling load for different Air Conditioning System

8ME04   Robotics & Industrial Applications
After successfully completing the course, students will be able to:

1 Explain the concept of robotics and its applications.

2 Illustrate robot anatomy and various configurations for different industrial applications.

3 Apply the concept of kinematic analysis of robots.

4 Apply the concept robot programming, its methods and programming languages.

8ME07   Project
After successfully completing the course, students will be able to:

1 Analyze relevant literature and define a research problem with well-formulated
  objectives.

2 Plan and execute the project using appropriate methodologies and systematic
  work distribution.

3 Demonstrate technical proficiency through structured presentations, demonstrations,

and effective communication.

4   Interpret and analyze feedback, refine project implementation, and present meaningful results and conclusions.

5   Exhibit professional ethics, teamwork, and project documentation skills through effective report writing and participation in research dissemination activities.