



MANAV SCHOOL OF ENGINEERING & TECHNOLOGY

Approved by AICTE New Delhi, Affiliated to SGBAU (DTE Code : 1276)

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7ME01 Mechatronics

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

- 1 Explain the scope and application of mechatronics, various electromechanical devices and components.
- 2 Explain the concepts of electronics signal data and data conversion.
- 3 Explain the working and applications of various electronic devices.
- 4 Illustrate the working of different control components of Hydraulic and Pneumatic Systems.
- 5 Construct pneumatic circuits used in mechanical line automation for industrial applications.
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7ME02 Productivity Techniques

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

- 1 Apply project selection methods to evaluate the feasibility of projects.
- 2 Use appropriate project management practices, tools and methodologies.
- 3 Analyze and document project requirements, assumptions and constraints.
- 4 Apply project time and cost estimates to define project baseline, schedule and budget.
- 5 Organize and manage critical resources for effective project implementation.
- 6 Analyze risks in implementing project.

7ME03 Industrial Management & Costing

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

- 1 Apply the concepts of Management and Finance for industry.
- 2 Apply the process of Marketing , Promotions and sales to serve the demands of society.
- 3 Analyze the concepts of estimation, costing and balance sheet for the industry.
- 4 Plan for managerial and financial activities for the industry.

7ME04 Energy Conversion-II

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

- 1 Analyze the performance of reciprocating compressor.
- 2 Analyze the performance of rotary compressor.

- 3 Solve the problems based on refrigeration cycles.
- 4 Explain different air conditioning system and psychrometric process.
- 5 Solve the problems based on gas turbines.
- 6 Explain the working of electric and hybrid vehicles.

7ME05 Automobile Engineering

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

- 1 Compare the different types of automobiles and their working
- 2 Analyze the concepts of fuels supply system and cooling system in automobile
- 3 Identify the need of different electrical systems in conventional automobile and Electrical Vehicles(E.V)
- 4 Explain the functioning of Transmission, Suspension, lubrication and control systems in Automobile.

7ME05 Computational Fluid Dynamics

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

- 1 Solve the governing partial differential equations of fluid flow and heat transfer problems
- 2 Construct and solve different mathematical models and computational methods for fluid flows
- 3 Apply the discretization method to solve fluid flow and heat transfer problems
- 4 Examine a CFD scheme for the respective fluid flow/transport phenomenon problem
- 5 Apply verification and validation of numerical model
- 6 Demonstrate the ability to use modern CFD Software tools