



MANAV SCHOOL OF ENGINEERING & TECHNOLOGY

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

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6ME01 Design of Machine Elements

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

- 1 Apply principles and design considerations used in machine design
- 2 Design different temporary and permanent joints for static loading
- 3 Design shafts and couplings for various applications for static loading
- 4 Design bearings for various applications and IC engine parts
- 5 Utilize design data books in designing various machine elements
- 6 Generate geometric model/drawings using dimensions of designed machine elements

6ME02 Dynamics of Machines

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

- 1 Apply the concept of static force analysis to kinematic mechanisms.
- 2 Apply the concept of the dynamic force analysis to kinematic mechanisms.
- 3 Apply the concept of gyroscopic couple and forces on a dynamic body.
- 4 Apply the basics of longitudinal vibrations and determine the natural frequency of the vibrating system.
- 5 Apply the basics of transverse vibrations and calculate the natural frequency of the vibrating system.
- 6 Evaluate the balancing masses and their orientation for balancing of the rotating and reciprocating masses.

6ME03 Control System Engineering

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

- 1 Demonstrate the fundamental concepts of automatic Control, mathematical modeling & determination of the transfer function of control systems using various methods
- 2 Analyze the time response of various systems & determine the Static error coefficients for different input & type of the systems
- 3 Evaluate the stability of linear systems using various methods.
- 4 Design and selection of industrial controller and Understanding of automatic speed controllers for Machine tools, Prime Movers and Steam Generator.

6ME04 Non-Conventional Energy Sources

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

- 1 Illustrate basic concept of renewable and non-renewable sources
- 2 Apply the basic concept of solar energy utilization and storage.
- 3 Illustrate basics working of photovoltaic panel, fuel cell and geothermal energy
- 4 Apply the concept of energy from ocean
- 5 Apply the concept of energy from wind.
- 6 Demonstrate understanding the concept of bio-mass energy resources.

6ME04 Lean Manufacturing

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

- 1 Explain the concept and applications of lean manufacturing
- 2 Interpret different element of lean manufacturing
- 3 Interpret different tools of lean manufacturing
- 4 Apply lean manufacturing in real life situation
- 5 Identify the barriers in implementation of Lean Manufacturing.
- 6 Explain the concept of Six Sigma

6ME08 Computer Aided Design and Simulation

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

- 1 Understand the concept of CAD.
- 2 Apply knowledge using CAD modeling for component design
- 3 Apply the knowledge of geometric transformation.
- 4 Construct the Mechanical & Manufacturing simulation systems