



SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGINEERING, SHEGAON
DEPARTMENT OF MECHANICAL ENGINEERING

COURSE OUTCOMES OF ALL COURSES OF SEVENTHW SEMESTER
BE MECHANICAL ENGINEERING

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

7ME09 Seminar

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

- 1 Organize seminar content logically to ensure clarity in objectives and coherence in information flow
- 2 Demonstrate in-depth understanding of the seminar topic by explaining key concepts with clarity and elaboration.
- 3 Apply effective presentation and communication techniques to engage the audience professionally.
- 4 Create clear, and visually appealing presentation materials to enhance understanding
- 5 Analyse and respond to audience queries with logical reasoning and critical thinking.