



SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGINEERING, SHEGAON

DEPARTMENT OF MECHANICAL ENGINEERING

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COURSE OUTCOMES OF ALL COURSES OF SECOND SEMESTER

ME MECHANICAL ENGINEERING

ADVANCED MANUFACTURING AND MECHANICAL SYSTEM DESIGN

**2MMD1 Advanced Material Technology**

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

- 1 Comprehensive understanding of various advanced materials.
- 2 Understanding the principles and concepts of internal structure of materials.
- 3 Applying the knowledge of material properties for various applications.
- 4 Exploring the advanced manufacturing techniques of various metals and non metals.

**2MMD2 Rapid Prototyping & Tooling**

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

- 1 Aware of role of rapid prototyping in product development process
- 2 To identify various Rapid Prototyping Processes
- 3 Analyze the principles of Stereo lithography and Laser sintering process
- 4 Understand various types of Pre-processing, processing, post-processing errors in Rapid prototyping.
- 5 To Identify the various types of data formats and software's used in Rapid prototyping
- 6 To Understand the concept of Reverse engineering

**2MMD3 Mechatronics in System Design**

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

- 1 Understand scope and application of mechatronics with various electromechanical devices and components
- 2 Understand basics of electronic signals, working, applications of electronic devices like microcontroller, PLC etc.

- 3 Understand role, working of different control components of hydraulic, pneumatic systems and their Applications
- 4 Make pneumatic circuits commonly used in mechanical line automation and their industrial applications.
- 5 Make hydraulic circuits commonly used in mechanical line automation and their industrial applications.
- 6 Analyze and also make simple but complete mechatronics systems.

#### **2MMD4 Experimental Stress Analysis**

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

- 1 Apply stress optic law using photo elastic bench
- 2 Use strain measurement methods
- 3 Use electrical resistance strain gauge
- 4 Apply Moire Methods
- 5 Apply brittle coating methods

#### **2MMD5 Computer Assisted Production Management**

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

- 1 Explain the fundamental knowledge of Computer Aided Process Planning
- 2 Explain Computer Assisted Quality Control
- 3 Explain Capacity Planning
- 4 Explain the Just in Time and Computer Aided Inventory Control.