



*Techno-Social Excellence*  
Marathwada Mitra Mandal's  
**INSTITUTE OF TECHNOLOGY (MMIT)**  
Lohgaon, Pune-411047.

“Mechanized Design Application”  
**Department of Mechanical Engineering**

**Course Name: Solid Modeling and Drafting**

**Class: SE Mechanical Engineering**

**Course Code: 202042 (2019 Pattern)**

**Course Objectives:**

1. To understand basic structure of CAD systems and their use to create geometric models of simple engineering parts
2. To introduce the curves and surfaces and their implement in geometric modeling
3. To apply basic concepts of 3D modeling, viewing and evaluate mass properties of components and assemblies
4. To apply geometrical transformations in CAD models
5. To understand data exchange standards and translators for various applications
6. To create engineering drawings, design documentation and use in manufacturing activities

**Course Outcomes:**

On completion of the course, learner will be able to

CO1. UNDERSTAND basic concepts of CAD system, need and scope in Product Lifecycle Management

CO2. UTILIZE knowledge of curves and surfacing features and methods to create complex solid geometry

CO3. CONSTRUCT solid models, assemblies using various modeling techniques & PERFORM mass property analysis, including creating and using a coordinate system

CO4. APPLY geometric transformations to simple 2D geometries

CO5. USE CAD model data for various CAD based engineering applications viz. production drawings, 3D printing, FEA, CFD, MBD, CAE, CAM, etc.

CO6. USE PMI & MBD approach for communication