Designing Modules

The purpose of this module is to develop design related competence in the candidates. The candidates will be taught to understand the industrial standards and perform 2D/3D modeling accordingly.

This module includes both classroom and practical training. It’s a base course for someone who wants to upgrade to CNC/VMC programming, and also for someone who wants to start their journey into designing.

COURSE CONTENT:

1. ZWCAD
   - CAD versus Manual Drafting
   - Co-ordinate systems (Absolute, Relative, and Polar)
   - All commands under draw, dimensions, modify, insert, block, edit, and tools
   - Drawing practice using the above commands

2. SolidWorks
   - All three aspects – Part, Assembly, and Drawing
   - Part – sketch, features, surface, sheet metal, and weldment
   - Practice involves generating live industry components

3. SolidCam
   - 2.5 D
   - Facing
   - Profiling
   - T-Slot
   - Facing
   - Pocketing
   - Drilling
   - HSR, HSM
   - Program generation and performing on machines

LEARNING OUTCOMES:

After completion of this module, the candidate will be able to:

Do 2D/3D modeling of industrial components

Apply multiple drawing and modification commands in SolidWorks/ZWCAD

Independently generate programs for complex 3D parts and run them on the machine

To help hasten the machining process of components