JIGS AND FIXTURES DESIGN IN SOLIDWORKS

Duration: 2 days
Time: 9:00am – 5:00pm
Methodology: Practical hands-on with using computers, lecturing, discussions and case studies
Target: Tool Designer
          Design Engineer
          Product Designer or Engineer
          Industrial Engineer
Prerequisite: To ensure a consistent learning experience for all students, participants should have:
• Mechanical Design Experience
• Experience with the Windows™ Operating System.
• Basic understanding of part design and drafting.
• Attended SolidWorks Essentials Course

Objective: To provide tooling engineers with a straight forward learning approach in using 3D CAD Modeling software to design jigs & fixtures. It provides basic knowledge in part modeling, assembly and drawing techniques adequate for design of jigs & fixtures. General workflow for designing jigs & fixtures will be discussed in this course.

Topics
• Introduction to Jigs & Fixtures Concept
  ▪ Functions of jigs & fixtures in industry
  ▪ Differences between jigs & fixtures

• Introducing Stages of Design of a Fixture
  ▪ Import existing 3D workpiece model
  ▪ Using existing standard library components as reference in fixture design.

• Basic Parts Modeling Skills
  ▪ Basic 2D Sketching technique
  ▪ Create Solid-based models

• Assembly Skills
  ▪ Visualize the project model in 3D
  ▪ Assembling different components to complete the project models
  ▪ Designing components within an assembly model for proper location

• Interference Checking
  ▪ Detect location of interferences
  ▪ Modifying design intent of solid models

• Details Technical Drawing and Bill of Materials
  ▪ Details technical drawing preparation
  ▪ Generate complete and detailed Bill of Material information