

## PolyWorks | Modeler™ Standard Training Course



### Introduction to PolyWorks

- Workspace Manager
- Basic Options
- File and Project Structures
- IMKey License Manager

### Introduction to IMInspect Scanning & Probing

- User Interface
- Basic Options
- Visual Layout

### Real-Time Quality Meshing

- Scanning Parameters
- Quality Metrics
- Unifying models using Targets and Best Fit

### Creating Features and Advanced Alignment Techniques using IMInspect Scanning and Probing

- Fitting and Probing Features
- Feature based Alignments

### Introduction to IMEdit

- User Interface, Basic Options and Typical Workflow

### Importing Models

- Importing Polygonal and CAD models

### Units

- Importing objects with different units

### Scaling

- Scaling models using “Units Conversion”

### **Creating Primitives**

- Creating Planes and Points Primitives

### **Alignment Techniques**

- Manual Alignment
- Rotate Plane A to Plane
- Translate to Plane

### **Model Topology and Watertightness**

- Analysing Polygonal for Triangular & Vertices errors
- Analysing Polygonal model for holes

### **Optimising Polygonal Meshes**

- Optimise Mesh
- Improve Equiangularity
- Subdivide Mesh
- Reduce Mesh

### **Hole Filling**

- Automatically, Interactively, using Surfaces and Merging Models

### **Smoothing Meshes**

- A tool that smooths Vertices along surfaces

### **Reconstructing Meshes**

- A tool that deletes selected triangles and reconstructs them

### **Creating and Editing Curves**

- Standard Curves
- Boundary Curves
- Feature Center Curves
- Fillet Tangent Curves
- Edge Curves

### **Boundary and Sharp Edge Reconstruction**

- Reconstructing triangles by using Curves

### **Creating Fillets, extending boundaries and slicing models**

- Creating Fillet rads
- Extruding boundary surface
- Slicing Models with Planes and Curves

### **Importing Objects from other Projects**

- Importing objects such as Models, Features, Cross-Sections etc from other Projects such as IMInspect Projects etc

### **Creating Cross-Sections**

- Create Cross-Sections by Anchoring 2 points or Numerically

### **Hole Cutting**

- Using closed Curves or Features from IMInspect Projects

### **Offset Models**

- Offset selected triangles in a selected direction with the option of keeping the original or even creating walls around the boundaries

**Mirror Models**

- Mirror selected triangles about a standard or created plane

**Extracting Sketch Outlines**

- Defining Sketch Planes and creating Sketch Outlines from either a Single Cross-Section, Multiple Cross-Sections or a Silhouette Edge

**Measuring Draft Angles**

- Measuring from 2 points and Inward vs Outward Draft Angles

**Creating Sketch Entities**

- Creating Lines, Circles, Arcs, Splines and Rectangles
- View Auto-Relations and Entity Deviations

**Editing Sketch Entities**

- Modifying entities numerically, adding relations, dragging entities, replacing entities, rebuilding entities and deleting entities

**Adding Dimensions**

- Linear Dimensions
- Angular Dimensions
- Radial Dimensions