



## Autodesk Inventor 2010 Tooling

Learn the fundamental principles of mold design for plastic parts, how to create a mold cavity and core, design the injection feeding systems as well as other required components for a mold, and how to analyze and document that design using Autodesk® Inventor® software. Hands-on exercises representing real-world, industry-specific design scenarios are included.

### Objectives

To provide users with a thorough understanding of the principal requirements and components of a plastic part mold, and how to design, validate, and document an injection mold design using Autodesk Inventor 2010. After completing this guide, students will be able to:

- Describe the characteristics and process of creating a plastic part mold design and begin the process of creating a mold assembly.
- Create the mold core and cavity after configuring and analyzing the part.
- Complete the creation of a mold design by adding mold layout features and assembly design components.
- Analyze the overall mold design, generate 2D drawings, and explain how to provide DWF files to others.

### Duration

2 days

### Who should attend?

Experienced Autodesk Inventor users.

### Pages

280

### Typical Schedule

Unless otherwise noted on your class registration e-mail, this class starts each day at 9:00 am and ends at 4:00 pm.

### Prerequisites

User should have completed a *Learning Autodesk Inventor* course and have a working knowledge of the following:

- Parametric part and assembly design using Autodesk Inventor.
- Parametric solid modeling concepts and design or mechanical engineering principles
- Plastic part design and/or injection mold design experience not required, but preferred.
- Microsoft® Windows® XP or Microsoft® Windows® 2000.

### Outline

#### Begin Creating Plastic Injection Molds

- Plastic Injected Part Design
- Create a Mold Assembly
- Adjust and Pattern a Placed Part

#### Designing the Mold Core and Cavity

- Gate Position, Material Shrinkage, and Workpiece Definition
- Analysis for Optimization
- Parting Design
- Core/Cavity Inserts

#### Mold Layout and Assembly Design

- Creating Runners, Gates, and Cold Wells
- Creating the Mold Base
- Ejecting the Part
- Sprue Bushings and Locating Rings
- Cooling System
- Lock Sets
- Combining Mold Components

#### Verify and Communicate the Mold Design

- Analysis for Verification
- Communicating the Mold Design

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