

# How to Design a Plastic Part

**Hours of Instructions:**

1-Day

**Course Description**

This course is an introduction to the process of plastics injection molding and is designed for technicians, process engineers, design engineers, quality auditors, supervisors, design project managers, and anyone who needs to create, approve, or modify the design of injection molded plastic parts.

This seminar will cover a review of the key components needed for a successful plastic application so that parts have a higher probability to be injection molded consistently. This course provides an excellent introduction to polymers and their relation to component design and processability. Attendees are encouraged to bring examples of their design challenges to the course for group discussion. The primary focus of this course is on injection molded applications.

**Course Objectives:**

- The cardinal rule of plastic part design
- Designing ribs, holes, gussets, and bosses
- Design for assembly
- Design for moldability
- The injection molding process for the designer
- Determine the gate location, weld line area and draft
- Various surface finishes
- Structural design
- When to use computer analysis
- Rapid prototyping

**Instructor(s):**

Plastics Selection, Design, and Processing course facilitators are from the Polymers Center of Excellence. Each course facilitator is an experienced Plastics Processing facilitator and auditor. PCE facilitators have assisted many companies with the training and implementation of their plastics selection, product design and processing systems. They have developed and conducted material selection, product design and processing system assessments and improvement techniques including the demonstrated specific understanding and implementation techniques related to scientifically based design and processing methodology.

**Location**

Polymers Center  
8900 Research Drive  
Charlotte, NC 28262  
(704) 602-4100

**Dress Code**

Business casual  
Polo or button down shirt  
Long pants  
Closed toe shoes, no heels

**Lab Etiquette**

No drinks, food or gum  
No tobacco or vaping devices  
Safety glasses must be worn