Plastic Part Design for Injection Molding:

- Demonstrates proven parts designing techniques
- Provides industry accepted plastic part design rules and details.
- Delivers important part design knowledge to improve part quality, eliminate mold revisions and reduce costs.

Developed in conjunction with Glenn Beall, a leading industry expert in part design, this fully-interactive course takes the designer through a coordinated step-by-step procedure that reduces the complex subject of plastic part design for injection molding to a simple, easy to understand technique.

Many injection molded parts suffer throughout their existence due to minor design defects. The use of this course and the guidelines explained will allow the designer to spot design defects in the drawing stage and save tens of thousands of dollars in molding problems and tooling revisions.

Lesson Titles and Descriptions:

Lesson 1: **Designing the Nominal Wall**
- Determining thickness of nominal wall, how it affects directional properties of the part, cycle time, amount of plastic used, clamp force, and the molder’s ability to fill cavities.

Lesson 2: **Designing Three Dimensional Shapes**
- When to use a radius and what size it should be. Specific recommendations for draft angles on ribs and other projections. Effects of mold finish and texturing on draft angles.

Lesson 3: **Designing Projections off the Nominal Wall**
- Designing projections for the required strength at the lowest cost for minimum cycle time and ease of assembly. Gives design rules for reinforcing ribs, gussets and standing walls.

Lesson 4: **Designing Depressions in the Nominal Wall**
- Effects of part shrinkage on depression design, draft angles and corner radii; minimizing the weldlines caused by depressions; how plastic affects pin and core designs, part dimensions and mold construction requirements.

Lesson 5: **Designing Hollow Bosses**
- The special design requirements of bosses with stringent stress and appearance requirements; rules for boss location, height, wall thickness and stress concentrations.

Lesson 6: **Designing Molded Threads**
- The unique design requirements of molded threads, rules for internal/external plastic thread design; presents several design examples to help avoid common errors.

Lesson 7: **Designing Parts with Undercuts**
- The structural considerations in the design of undercuts stripped from the mold; the complications of the undercut design; special strength and stiffness considerations. Includes a summary of the entire course.

Lesson 8: **Summary**
PAULSON’S INTERACTIVE LEARNING SYSTEM

- **More Effective Training:** Get a 40% increase in knowledge retention and comprehension using interactive technology.

- **Scheduling Flexibility:** Training is available to all shifts, 24 hours a day without affecting production.

- **Automatic Record Keeping:** You can test and track employee progress automatically.

- **No Instructor Required:** Fully interactive format provides either a self-paced, one-on-one or classroom learning environment.

- **Reduced Training Costs:** Train on company time without loss of production. No dedicated instructor, no overtime and no overhead add up to large savings.

- **Increased Motivation:** Immediate feedback and personal involvement are key factors in training effectiveness.

- **Complete Curriculum:** Paulson’s fully interactive training program gives your employee valuable skills for the molding process with full motion video, text, audio and 3-D graphic animation.