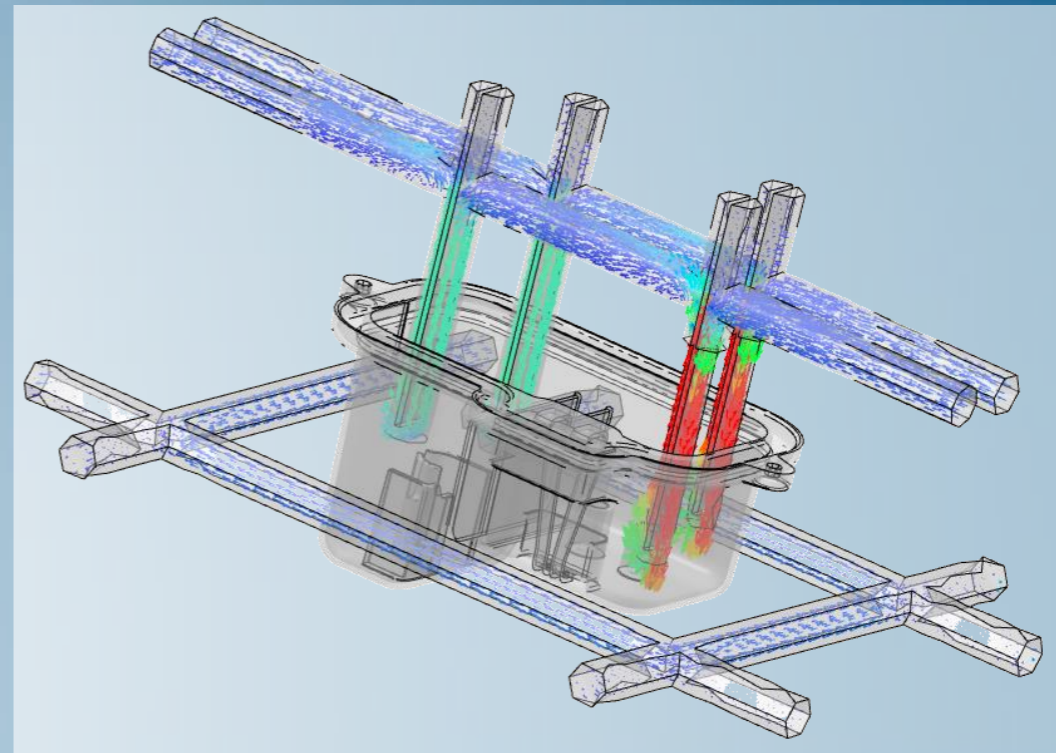


# Plastic Mold Injection Essentials

R2018x



**3DEXPERIENCE**<sup>®</sup>



# About this Course

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## Course objectives

Upon completion of this course you will be able to:

- ▶ Perform injection molding simulations
- ▶ View and evaluate simulation results

## Targeted audience

This course is intended for the following role:

- ▶ Plastic Injection Mold Engineer

## Prerequisites

None.



4 hours

# Day 1

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- ▶ Lesson 1 Introduction
- ▶ Lesson 2 Simulation Setup for Injection Molding
- ▶ Workshop 1 Simulation Setup for a Smoke Alarm Cover
- ▶ Lesson 3 Postprocessing
- ▶ Workshop 2 Smoke Alarm Simulation, Postprocessing and Modification
- ▶ Workshop 3 Simulation of an Electronic Cover with Inserts
- ▶ Workshop 4 Simulation of an Electronic Cover with Mold Cooling

# Additional Material

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- ▶ Appendix 1      Cloud-based Simulation Roles

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# Revision Status

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|                   |             |                       |
|-------------------|-------------|-----------------------|
| <b>Lesson 1</b>   | <b>8/18</b> | <b>New for R2018x</b> |
| <b>Lesson 2</b>   | <b>8/18</b> | <b>New for R2018x</b> |
| <b>Lesson 3</b>   | <b>8/18</b> | <b>New for R2018x</b> |
| <b>Appendix 1</b> | <b>8/18</b> | <b>New for R2018x</b> |
| <b>Workshop 1</b> | <b>8/18</b> | <b>New for R2018x</b> |
| <b>Workshop 2</b> | <b>8/18</b> | <b>New for R2018x</b> |
| <b>Workshop 3</b> | <b>8/18</b> | <b>New for R2018x</b> |
| <b>Workshop 4</b> | <b>8/18</b> | <b>New for R2018x</b> |



# Lesson 1: Introduction

## *Lesson content:*

- ▶ Introduction
- ▶ Plastic Part Design Rules
- ▶ Insert Molding
- ▶ Mold Cooling
- ▶ **3DEXPERIENCE** Platform Basics
- ▶ Geometry for Simulation



1 Hour

# Lesson 2: Simulation Setup for Injection Molding

## *Lesson content:*

- ▶ Plastic Mold Injection Overview
- ▶ Parts
- ▶ Materials
- ▶ Process Settings
- ▶ Conditions
- ▶ Feature Manager
- ▶ Meshing
- ▶ Simulate
- ▶ Workshop Preliminaries
- ▶ Workshop Files



1 hour

# Workshop 1: Simulation Setup for a Smoke Alarm Cover

In this workshop, you will create a simulation setup for the three-dimensional model of the Smoke Alarm top cover shown below.

After completion of this exercise, you will be able to:

- a. Create the simulation setup steps for Plastic Mold Injection
- b. Define an injection location.
- c. Set up a mesh for a given model



30 minutes

