## **Autodesk<sup>®</sup> Simulation Mechanical**

### **Part II Course Overview**



# **Duration:** 2 days

Who Should Attend?
Autodesk Simulation
Mechanical or Multiphysics
users that need to see how
mechanisms interact with
each other over time. You
will leave this course
understanding how to
analyze for stress and
deformation under real
world operating conditions.

Autodesk Simulation Mechanical Part I is a prerequisite for this course.

To register for upcoming classes Email:

NA.MFG.simulation.training
@autodesk.com

Phone: +1.412.967.2779

#### **Course Description**

This course will introduce you to large scale motion, large deformation, large strain with contact, and non-linear material analyses capabilities available within Autodesk® Simulation Mechanical and Multiphysics. This course assumes you have a working knowledge of the Autodesk Simulation user interface and basic FEA theory. It is recommended that you attend the Autodesk Simulation Mechanical Part I course prior to attending this class. Many people choose to take both Part I & II in the same week.

#### Course Outline - Autodesk Simulation Mechanical Part II

#### Introducing Mechanical Event Simulation

- Stress and Strain Review
- Numerical example

#### **Events and Prescribed Motion**

- Dynamic Analysis Techniques
- Time Steps
- Time-Dependent Boundary Conditions
- Results Evaluation

#### Contact and Impact

- Contact Parameters
- Friction
- Impact Planes

#### Non-Linear Materials

- Elastic
- Hyperelastic
- Foam
- Viscoelastic
- Plastic
- Electrical

#### Geometric Nonlinearities

- Post Buckling Behavior
- Variable Time Step Analyses

#### Results-Based Loading

- Lookup Values
- Specifying Equations
- Conditional Statements

#### **Engineering Elements**

- Shell
- Membrane
- Line
- Beam
- Pipe
- Slider
- Actuator
- Spring
- Pulley



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