

## SOLIDWORKS TRAINING COURSES SUMMARY

Exclusive from Conceptia Konnect, SOLIDWORKS Simulation course has been developed to deliver the power and potential of SOLIDWORKS simulation through a structured programme built upon the industry best practice. Let us support you to achieve the ultimate in design efficiency, productivity and innovation in the quickest time possible. This course will provide an in-depth coverage on the basics of Finite Element Analysis (FEA), covering the entire analysis process from meshing to evaluation of results for parts and assemblies, and also to create better designs in SOLIDWORKS by performing analysis and evaluating the behaviour of their parts and assemblies under actual service conditions.

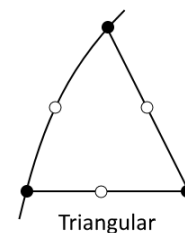
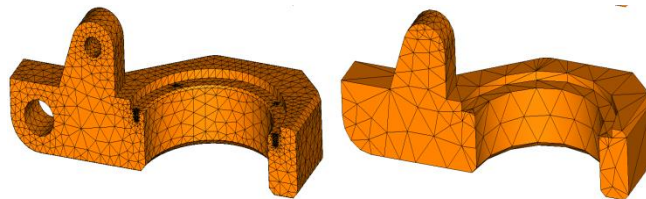
### Prerequisites:

1. Knowledge of SOLIDWORKS and basic mechanical engineering concepts is recommended..
2. The engineer should have basic knowledge on FEA.

## SOLIDWORKS Simulation Basic Course Details: -

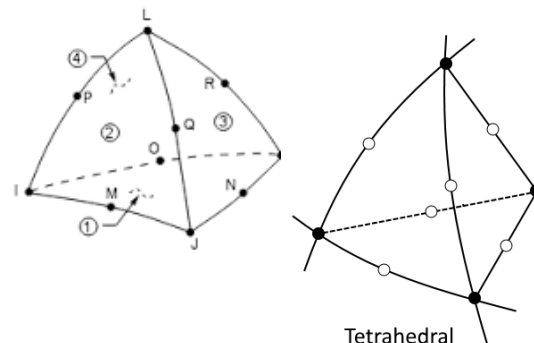
### Introduction to SOLIDWORKS Simulation

- What is SOLIDWORKS Simulation?
- What Is Finite Element Analysis?
- Build Mathematical Model
- De-featuring
- Idealization
- Clean-up
- Build Finite Element Model
- Solve Finite Element Model



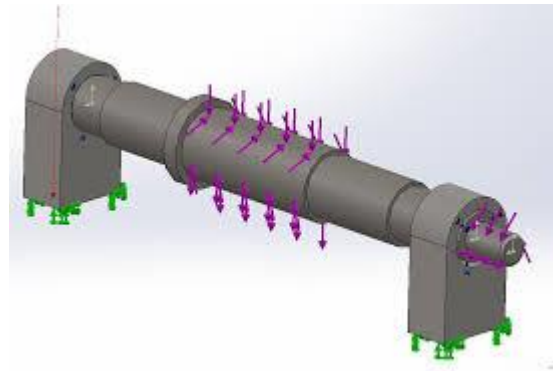
### Finite Elements

- Element Types Available in SOLIDWORKS Simulation
- First Order Solid Tetrahedral Elements
- Second Order Solid Tetrahedral Elements
- First Order Triangular Shell Elements
- Second Order Triangular Shell Elements
- Beam Elements
- Choosing Between Solid and Shell Elements
- Draft vs. High Solid and Shell Elements
- Degrees of Freedom
- Calculations in FEA



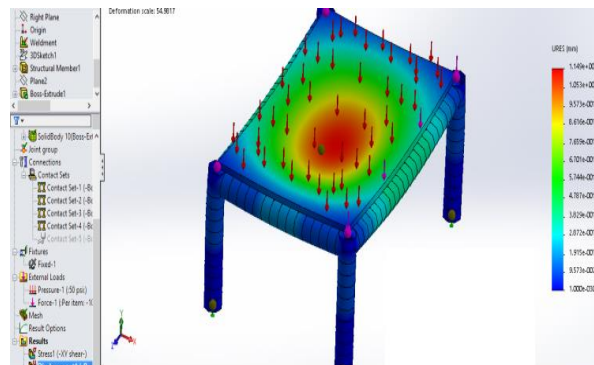
## The Analysis Process

- Stages in the Process
- SOLIDWORKS Simulation Interface
- SOLIDWORKS Simulation Options
- Plot Settings
- Assigning Material Properties
- Fixtures
- Fixture Types
- External Loads
- Pre-processing Summary



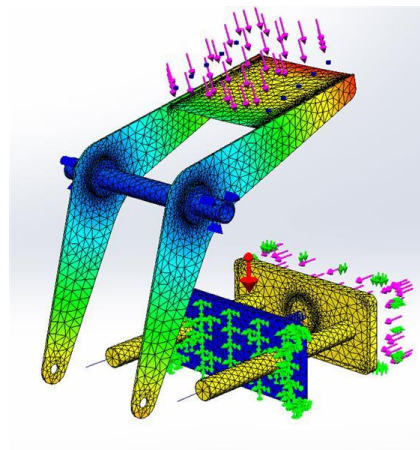
## Meshing

- Standard Mesh
- Curvature Based Mesh
- Blended Curvature Based Mesh
- Mesh Density
- Element Sizes
- Minimum Number of Elements in a Circle
- Ratio
- Mesh Quality



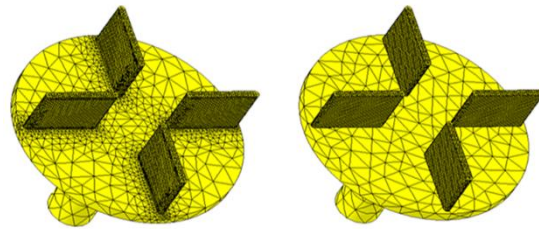
## Assembly Analysis with Contacts

- Project Description
- Stages in the Process
- Component Contact Component Contact: Options
- Component Contact: Default Setting
- Component Contact: Hierarchy and Conflicts
- Viewing Assembly Results
- Conclusion
- Handle Contact
- Required Force
- Pliers with Local Contact
- Local Contact
- Local Contact Types
- No Penetration Local Contact Properties, Accuracy & Remarks



## Compatible/Incompatible Meshes

- Project Description
- Compatible Mesh
- Incompatible Mesh
- Automatic Switch to Incompatible Mesh
- Incompatible Bonding Options
- Cyclic Symmetry



Compatible vs. Incompatible mesh for adjoining parts

## Mixed Meshing Solids, Beams & Shells

## Thermal Stress Analysis

## Meshing, Solvers, and Tips & Tricks

**NOTE: For More Details feel free to contact us**

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