

## Learning Module

# CST Studio Suite - Multiphysics

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This course describes how to use CST's Multiphysics Studio to perform thermal and mechanical analysis. The course reviews the basic concepts of heat transfer and mechanical behaviors of materials, then explains the sources, boundary conditions, meshing and solver options available in MPS, and illustrates the steps of an EM-Thermal-Mechanical coupled simulation.

### Objectives

Upon completion of the course you will:

- Obtain basic thermal and mechanical theories.
- Get an overview of CST's Multiphysics Studio's capabilities.
- Understand basic sources, boundary conditions, meshing options and solver options in CST Multiphysics Studio.
- Be able to run an EM-Thermal-Mechanical coupled analysis.

### Knowledge Prerequisites

Introduction to CST Studio Suite.

### Language(s) for selected release

English

### Brands

Simulia

### Available Releases

SIMULIA 2020, SIMULIA 2019

### Duration

8 hours

### Discipline

CST Studio Suite

## Contents

Overview - CST Studio Suite - Multiphysics

1 - Basic Principles and Solver Choices

2 - The Classic Solvers THs and THT

3 - The Conjugate Heat Transfer Solver CHT

4 - Thermal Sources, Drains and EM-Thermal Links

5 - Structure Mechanics Solver

Workshops