Learning Module

Introduction to CST Studio Suite

Throughout this course you will become familiar with the basic usage of CST STUDIO SUITE in terms of its modeling and simulation capabilities. Participants will learn about the general setup, submission, and result analysis procedures for high-frequency 3D electromagnetic simulations. This class will also introduce the various high frequency solvers available CST MICROWAVE STUDIO and provide a behind-the-scenes look into the FIT and FEM algorithms for the general purpose Time-Doman and Frequency-Domain solvers respectively.

Objectives
Upon copmletion of this course you will be able to:
- Navigate the general layout of the CST SUTDIO SUITE interface
- Generate CAD geometries within the native modeling interface
-Set up the project environment with the desired units, frequency settings, background materials and boundary conditions
- Understand the various material types that exist and how to define them
- Setup excitations using lumped elements and waveguide ports
- Setup result monitors to obtain 2D/3D field data
- Choose and set up the most appropriate solver and algorithm for high frequency applications.
- Run Time-Domain (FIT) and Frequency-Domain (FEM) simulations including parametric sweeps and optimizations.
- Analyze simulation results such as S-parameters, voltages, currents, 3D nearfields and farfields.
- Extract data from the standard result set through the use of post-processing templates.

Knowledge Prerequisites
None.

Brands
Simulia

Available Releases
SIMULIA 2021, SIMULIA 2020, SIMULIA 2019, SIMULIA 2018

Duration
8 hours

Discipline
CST Studio Suite

Language(s) for selected release
English

Contents

Overview - Introduction to CST STUDIO
1 - Introduction
2 - Basic and Advanced Modeling Techniques
3 - Solver Overview
4 - Ports, Materials and Boundaries
5 - High Performance Computing
6 - Results Handling and Postprocessing
7 - Optimizer Overview