SIMULIA Fluid Simulation Essentials

Course Code	SIM-en-FMK_F
Brand & Release	**3D**EXPERIENCE® R2021x -R2022x
Duration	2 days
Level	Fundamentals
Prerequisites	Familiarity with the **3D**EXPERIENCE® Platform

Objectives:

This course is an introduction to solving fluid flow and conjugate heat transfer problems in the **3D**EXPERIENCE® Platform. In this course, you will learn workflows for steady-state internal and external flow as well as Conjugate Heat Transfer (CHT) problems through the Creation and Fluid Scenario apps.

Class Structure:

Upon completion of this course you will be able to:
- Define fluid flow simulations in the **3D**EXPERIENCE® Platform, including isothermal internal and external steady-state flow.
- Perform fully coupled conjugate heat transfer (CHT) simulations.
- Postprocess flow simulation results.

The course is intended for the following Roles:
- Fluid Dynamics Engineer
- Thermal Engineer
- Aerospace Cabin Thermal Engineer
- Aerospace HVAC and ECS Engineer
- Multidiscipline Performance Engineer

Class Lessons:

Lesson 1: Fluid Dynamics on the **3D**EXPERIENCE Platform
Lesson 2: Geometry for Fluid Simulation
Lesson 3: Fluid Model Definition
Lesson 4: Fluid Scenario Definition
Lesson 5: Flow Simulation Output Requests and Execution
Lesson 6: Postprocessing Flow Simulation Results
Lesson 7: Design Changes and Redesign
Lesson 8: Steady-State External Flows
Lesson 9: Conjugate Heat Transfer