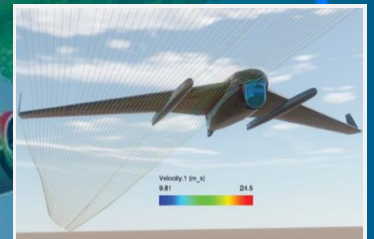


FLUID SIMULATION: ADVANCED TOPICS

SIMULIA COURSE DESCRIPTION



Level: Advanced
Products: 3DEXPERIENCE
Disciplines: Fluids

Audience
This course is intended for all roles that enable the Fluid Scenario Creation app, including:

- Fluid Dynamics Engineer
- Thermal Engineer

Why take this course?

This course includes lessons and workshops covering advanced capabilities and techniques that can be included in a flow simulation using the Fluid Model Creation and Fluid Scenario Creation apps on the 3DEXPERIENCE platform.

What will you learn?

Upon completion of this course you will be able to:

- Understand convergence issues for steady-state and transient flow procedures.
- Include porous media modeling in a fluid flow analysis.

- Mesh fluid and solid domains using different meshing techniques.
- Configure and run simulations including compressible and/or multiphase flow.

Explore Your Learning Options

Live Sessions	Engage in Real-Time, interactive group workshops guided by experts. Learn and collaborate live in your preferred language and time zone.	Join a live session
On-Demand Learning	Access expert-designed courses anytime, anywhere. Perfect for independent learners looking to build skills on their schedule.	Start Learning Now
Private Training	Exclusive, tailor-made sessions designed to meet your team's unique goals with expert guidance.	Contact Us for Custom Training



Gain hands-on experience and master real-world workflows through guided, practical training sessions.

Run simulations collaboratively within the 3DEXPERIENCE platform, connecting design, data, and analysis seamlessly.

– SIMULIA Training Expert Team

What You Need to Know Before Starting

The following course is strongly recommended prior to taking this one:

- Fluid Simulation Essentials

Agenda for Virtual Live Sessions

Participate in hands-on, real-time workshops where you'll gain practical expertise. Here's what you'll cover:

[Join an Instructor Led Session](#)

Day 1

Lesson 1: Introduction
Workshop 1: Workshop Preparation (optional)
Lesson 2: Convergence
Workshop 2: Steady-state Convergence with Drone in Cruise
Lesson 3: Porous Media Modeling
Workshop 3: Air Intake System with Porous Media
Lesson 4: Transient Flow
Workshop 4: Unsteady Flow across a Circular Cylinder
Lesson 5: Compressible Flow
Workshop 5: Transonic Flow over an Airfoil
Lesson 6: Multiphase Flow
Workshop 6: Cavitating Flow through a Narrowing Pipe
Lesson 7: Advanced Meshing Techniques
Workshop 7: Electronics Module CHT - Advanced Meshing

Additional Material

Appendix 1: Turbulence
Appendix 2: Modeling Techniques
Appendix 3: Additional Flow Conditions

Want to Learn More?

Expand your knowledge by exploring our [course Catalog](#) and browsing learning paths on [Eduspace](#), our dedicated e-learning platform.

Join the Community!

[Join the SIMULIA community](#) to connect, learn, and stay updated.



3DEXPERIENCE®

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