



ENGINEERING TOMORROW

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THROUGH
DIGITALIZATION

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Ansys CFD 2024 R1 Course:

Ansys Geometry:

•Day 1:

- **Ansys Geometry overview:** General description of the Ansys Geometry interfaces (Design Modeler / SpaceClaimDirect Modeler), Sketching and 3D modeling techniques, Geometry simplification and repair, Working with design parameters
- **Workshop 1.1:** Using sketches as base objects for 3D operations
- **Workshop 1.2:** Slice operation, pattern operation, mid-surface creation, analysis tools
- **Workshop 1.3:** Finding geometry imperfections using various tools and simplifying / repairing of an assembly
- **Workshop 1.4:** Generation of a parameterized 3D model

Ansys Meshing:

•Day 2:

- Ansys Meshing overview: Finite Element Method overview, Generating a mesh, Creating named selections, Global mesh controls
- **Workshop 2.1:** Mesh generation using different methods
- **Workshop 2.2:** Using global controls for mesh sizing and refinement

•Day 3:

- MFluent meshing overview: Watertight geometry workflow WS 3.1: Mixer Meshing WS 3.2: Arcjet Meshing

Ansys CFD:

•Day 4:

- Ansys CFD overview: General description of Fluent 2024 R1 interface, Basics of CFD analysis, Pre & Postprocessing
- **Workshop 4.1:** Fluid flow and heat transfer in a mixing tee

•Day 5:

- Fluent Workspace and Physics WS 5.1
- Fluid flow distribution inside a manifold WS 5.2 - Fluid flow inside a duct with/without vanes

Ansys CFD 2024 R1 Course:

Ansys CFD:

•Day 6:

- Fluent results tab overview WS 6.1:
Flow over heated objects

•Day 7:

- Fluent Best Practice Guidelines
WS 7.1: Transonic Flow Over a NACA
0012 Airfoil

Ansys CFD:

•Day 8:

- Turbulence modelling WS 8.1:
Turbulent Flow past a backward
facing step

•Day 9:

- Conjugate heat transfer(simultaneous
conduction in a solid part coupled ar
walls to convection in the fluid), Natural
convection of the heated air, Thermal
radiatio between surfaces -Workshop 6.1:
Electronics cooling with natural
convection and radiation

THANK YOU!



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