

# Fluent Workshop Syllabus

## Finite Volume Method

- [Lecture notes on FVM](#)
- [Lab exercise—Workflow](#)

## Preprocessing Composite Geometry

- [Lecture notes](#)
- [ANSYS slides](#)
- [Lab exercise—Geometry](#)
- [Lab exercise—Meshing](#)
- [Steve Owen, A Survey of Unstructured Mesh Generation Technology](#)

## Convective Flow + Thermal Coupling

- [Lab exercise—Coupling](#)
- [Lab exercise—Geometry](#)
- [Heat Equation Documentation](#)
- [Heat Equation Slides](#)
- [System Coupling Documentation](#)
- [System Coupling Slides](#)

## BCs

- [Lecture notes](#)
- [Lab exercise—Boundary conditions](#)
- [Handout—Boundary conditions](#)

## Transient Solution & Numerical Solution

- [Pulsing jet movie](#)
- [Lab exercise—Transient flow](#)

## Compressible External Flow

- [Lab exercise—External compressible flow \(airfoil\)](#)
- [Lab exercise—Internal compressible flow \(jet nozzle\)](#)

## Verification and validation

- [Lecture notes](#)
- [Handout—V&V](#)
- [Lab—V&V](#)

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## Verification and validation

- [Handout—Scripting](#)
- [Lab—Drag monitors](#)

## Turbulent Flow

- [Lectures in Turbulence for the 21st Century](#)
- [Modeling Turbulence](#)
- [Lab exercise—Turbulent wake](#)
- [Handout—Turbulence models](#)

## Chemical Reactivity

- [Slides](#)
- [Notes](#)
- [Lab—Combustion modeling](#)

## Adaptive and Dynamic Meshing

- [Lab—Dynamic meshing \(not required but excellent example\)](#)
- [Lab—Adaptive meshing](#)