FluidFlow

ADVANCED TRAINING ON DEMAND

Course Syllabus

Liquid · Gas · Pumps · Control Valves · Slurry · Non-Newtonian Flow Modeling.

17 self-paced modules across 7 technical tracks

fluidflowinfo.com

Flite Software N.I. Ltd

PROGRAM OVERVIEW

Advanced Training On Demand

FluidFlow Advanced Training On Demand is a self-paced curriculum designed to explain concepts and nuances of hydraulic modeling and analysis through the use of FluidFlow.

The curriculum is organized into seven tracks that build on one another, starting from general model setup and results interpretation (Fundamentals), moving through rotating equipment (Pumps), compressible flow (Gas), and final control elements (Control Valves), before specializing into multiphase and complex-fluid systems (Slurries, Non-Newtonian and Liquid-Gas Flow).

This syllabus elaborates every active course in the current catalog — 17 courses in total — including the specific lessons covered inside each one, so engineers and training coordinators can plan a learning path by role, by flow type, or by project need.

WHO IT'S FOR

EPC & design engineers	Validating a design against vendor data, sizing pumps and control valves, and producing defensible process specifications.
Owner-operator engineers	Troubleshooting existing systems, replacing spreadsheet calculations, and diagnosing flow, pressure, or cavitation issues in service.

FORMAT

Each course is delivered as a self-paced on-demand module: a structured lesson sequence with worked FluidFlow exercises, followed by a set of key takeaways. Courses within a track are best taken in order; course codes map to the track and sequence shown in the learning path below.

LEARNING PATH

Seven Tracks, Seventeen Courses

1 Fundamentals

Model setup, results interpretation, Newtonian friction loss, and general pipe system analysis — the required starting point for every FluidFlow user.

Liquid · All Models

F01 · F02 · F03 · F04

2 Pumps

Pump duty, NPSH, affinity laws, and evaluating a selected centrifugal pump across its full operating envelope.

Liquid · Rotating Equipment

P01 · P02

3 Gas Flow

Real-gas property estimation, pressure-dependent friction loss, gas header distribution, and recognizing sonic choking.

Gas · Compressible Flow

G01 · G02

4 Control Valves

Control valves as the adjustable pressure-drop element in a loop: sizing, pressure-drop allocation, and installed-range evaluation.

Liquid · Gas

CV01

5 General Slurry Modeling

Classifying a slurry, sizing against deposition velocity and energy consumption, and correcting pump performance for slurry service.

Slurry

GS01 · GS02 · GS03

6 Settling Slurry Modeling

Inlet boundary and particle-size configuration, deposition velocity correlations (including inclined pipe), and the eight settling-slurry friction-loss correlations.

Settling Slurry

SS01 · SS02 · SS03

7 Non-Newtonian Modeling

Rheology model selection, yield stress determination, and the matching friction-loss correlations for non-Newtonian liquids and homogeneous slurries.

Non-Newtonian

NN01 · NN02

TRACK 1 OF 7

Fundamentals

Liquid · All Models

The required starting point for every FluidFlow user: how to set up a solvable hydraulic model, read and troubleshoot results, size Newtonian liquid pipe friction loss correctly, and understand what drives pressure and flow distribution in a pipe network.

F01 FluidFlow Modeling Tools & Techniques

Learn the practical workflow for building and documenting solvable FluidFlow hydraulic models

LEARNING GOALS

This course equips you to plan and build solvable, realistic FluidFlow models by setting the right objectives and boundary conditions, prioritizing key inputs, selecting and configuring components correctly, and handling missing data, elevations, and early-stage geometry with sound engineering practice.

- ✓ **Understand that modeling is not just about the software**
- ✓ **Apply correct representation of boundary conditions**
- ✓ **Effectively utilize components on hydraulic models**
- ✓ **Learn practical ways of improvising missing data**
- ✓ **Know when and when not to use Auto sizing feature**
- ✓ **Avoid a commonly overlooked modeling issue: Defining elevation**

COURSE OUTLINE

1. **Modeling Preparation**
   Establishing the foundation for selecting and applying appropriate FluidFlow modeling tools and techniques.
2. **Components**
   Selecting and applying FluidFlow components to represent the equipment, piping, and boundary conditions that make up a hydraulic model.
3. **Auto Size Feature**
   Using Autosize to determine component requirements or assess selected equipment, while maintaining appropriate network constraints.
4. **Basic Hydraulic Model Parts**
   Understanding how inlet boundaries, pipes and nodes, and outlet boundaries work together to form a solvable FluidFlow model.
5. **Modeling Missing Components**
   Using Kv and User Defined Generic components to represent equipment pressure-loss behavior when standard components or complete pressure change data are unavailable.

6 **Guesstimating Pipe Lengths**
Estimating preliminary pipe lengths from plot-plan distances and routing factors when detailed layouts are unavailable.

7 **Defining Elevation Correctly**
Applying a consistent elevation datum throughout the model to avoid errors in predicted pressures, pump head, and flow distribution.

F02 FluidFlow Analysis Tools & Techniques

Learn the practical tools and techniques that improve analysis of FluidFlow hydraulic models

LEARNING GOALS

Be able to quickly confirm results are analysis-ready, extract and focus key outputs, use messages to troubleshoot, and apply charts to validate and communicate system behavior.

- ✓ **Use visual calculation cues to decide if results are ready for analysis**
- ✓ **Access and customize numerical results**
- ✓ **Identify key calculation results to review first**
- ✓ **Effectively interpret calculation messages**
- ✓ **Use charts for effective analysis**

COURSE OUTLINE

1 **Calculation Visual Cues**
Using the status bar, flow direction arrows, and component highlights to assess calculation status and identify issues before analyzing results.

2 **Messages**
Interpreting showstoppers, warnings, and hints to identify model issues and determine which conditions require action before relying on results.

3 **Numerical Results**
Accessing and customizing component results through the Results tab, flowsheet tables, and fly-bys to support efficient analysis and troubleshooting.

4 **Key Calculation Results**
Reviewing flow rate, pressure, pressure drop, and temperature first to assess whether model results are reasonable and consistent with the calculation basis.

5 **Charts**
Using component, composite, and flowsheet charts to visualize hydraulic behavior, identify trends, and communicate results.

F03 Newtonian Liquid Friction Loss Modeling

Maximize use of FluidFlow Newtonian liquid friction loss correlations to model systems accurately and efficiently.

LEARNING GOALS

Set-up and easily justify selection of Newtonian liquid friction loss correlations when modeling pipe networks.

- ✓ **Set-up FluidFlow pipe component correctly**
- ✓ **Understand different liquid friction loss correlations**
- ✓ **Apply appropriate friction loss correlation**
- ✓ **Model actual pipe conditions in FluidFlow**

COURSE OUTLINE

1. **Pipe Component**
   Defining pipe geometry, length, condition, and friction model to calculate and analyze Newtonian liquid pressure loss.
2. **Moody Friction Model**
   Applying Reynolds number and pipe roughness to determine friction factor and calculate pressure loss across flow regimes
3. **Pipe Ageing**
   Accounting for changes in pipe roughness and scaling to assess their effects on pressure loss and system performance.
4. **Hazen-Williams Friction Model**
   Applying a water-specific friction-loss correlation, primarily for firewater calculations, while recognizing its limitations.
5. **Shell-MIT Friction Model**
   Modeling friction loss in heated, high-viscosity crude oil pipelines and recognizing how its treatment of roughness differs from Moody.

F04 General Pipe System Analysis

Learn how to size pipes and interpret pressure–flow behavior to predict and control flow distribution in branched networks using FluidFlow..

LEARNING GOALS

Size and analyze piping networks from simple to complex by applying sizing criteria, pressure-energy concepts, junction convergence/divergence behavior, and resistance-driven flow distribution principles.

- ✓ **Learn practical pipe sizing**
- ✓ **Understand pressure energy conversion**
- ✓ **Effectively model flow split and convergence**

✓ **Model and analyze branching systems**

COURSE OUTLINE

1. **Pipe Sizing**
   Applying sizing criteria and FluidFlow’s Pipe Autosize feature to select practical pipe diameters that meet system requirements.

2. **Pipe Pressure-Energy Conversion Fundamentals**
   Interpreting how friction, elevation and velocity changes contribute to pressure change along a pipe.

3. **Flow Convergence and Divergence**
   Modeling flow splitting and recombination through tees and wyes, including their influence on junction losses and flow distribution.

4. **Flow Distribution Fundamentals**
   Analyzing flow in series, parallel and branched networks and evaluating pipe sizing, symmetry and flow-regulating devices to improve distribution.

TRACK 2 OF 7

Pumps

Liquid · Rotating Equipment

From first-pass pump duty to full centrifugal pump curve modeling: sizing against real system hydraulics, protecting NPSH margin, and evaluating a selected pump across its entire operating envelope rather than a single design point.

P01 General Pump Sizing

Use FluidFlow to determine pump duty, identify and address potential system issues and turn software results to vendor-ready process specification

LEARNING GOALS

- ✓ **Identify which pump type to apply**
- ✓ **Calculate pump duty using FluidFlow**
- ✓ **Understand NPSHA – impact and influencing factors**
- ✓ **Establish system design pressure from pump sizing results**
- ✓ **Apply practical pumpsizing considerations**

COURSE OUTLINE

This course covers the fundamentals of pump types, sizing methodology, and suction system design using FluidFlow as the primary modelling tool. Participants will develop the practical skills needed to size a pump, evaluate system hydraulics, and produce a process specification suitable for vendor submission..

1. **Pumps Introduction**
   Comparing centrifugal and positive displacement pumps to understand their operating characteristics and select an appropriate pump type for the service.
2. **Pump Sizing**
   Using FluidFlow to determine pump duty and assess associated requirements, including pipe sizing, suction conditions and system design pressure.
3. **Developing Pump Specifications**
   Translating FluidFlow results and operating-case requirements into process data for a pump specification

P02 Centrifugal Pump Modeling

Use FluidFlow to model centrifugal pump performance, evaluate pumps against proven engineering checkpoints, and turn hydraulic analysis results into confident pump selection and performance analysis.

LEARNING GOALS

This course equips you with the knowledge and practical skills to model centrifugal pump performance in FluidFlow — from interpreting manufacturer curves and applying affinity laws, through to evaluating pumps against the five performance checkpoints that determine whether a pump is safe, efficient, and fit for purpose across all operating conditions.

- ✓ **Interpret centrifugal pump performance curves**
- ✓ **Add and apply pump performance curves**
- ✓ **Correctly apply pump curve viscosity correction**
- ✓ **Model pump performance modification using pump affinity laws**
- ✓ **Identify conditions that can drive pump below minimum allowable flow**

COURSE OUTLINE

1. ### Centrifugal Pump Performance Curves
   Interpreting capacity, efficiency and NPSHR curves to understand pump behavior across its operating range.

2. ### Centrifugal Pump Affinity Laws
   Estimating how changes in impeller diameter or operating speed affect pump flow, head and power.

3. ### Installing Centrifugal Pump Curve Data
   Entering manufacturer curve data and operating limits in FluidFlow to model the pump’s operating point against the system curve.

4. ### Centrifugal Pump Curve Viscosity Correction
   Applying FluidFlow’s viscosity correction to account for the effect of Newtonian liquid viscosity on pump performance.

5. ### Pump Revamps and VFDs
   Using affinity laws to evaluate impeller changes and variable-speed operation against revised system requirements.

6. ### Evaluating Centrifugal Pump Performance
   Assessing shutoff head, NPSH margin, BEP proximity, minimum allowable flow and runout across operating scenarios.

TRACK 3 OF 7

Gas Flow

Gas · Compressible Flow

Model compressible gas systems correctly: real-gas property estimation, pressure-dependent friction loss via the Duxbury method, gas header distribution behavior, and recognizing sonic choking as a physical capacity limit rather than a modeling error.

G01 Gas Flow Property Modeling

The foundation course for modeling compressible gas flow and physical properties in FluidFlow.

LEARNING GOALS

This course equips you to model gas systems in FluidFlow — from understanding coupled, state-dependent properties and selecting the right estimation methods, to defining new gases, applying consistent flow references, and accounting for the Joule-Thomson effect.

- ✓ **Understand why gas flow is compressible**
- ✓ **Recognize that gas properties are state dependent**
- ✓ **Apply appropriate physical property estimation methods**
- ✓ **Define new gas entries in the database**
- ✓ **Distinguish mass, actual and referenced volumetric flows**
- ✓ **Appreciate the impact of Joule-Thomson effect in pipe systems**

COURSE OUTLINE

1. **Gas Pipe Property Coupling**
   Understanding how pressure, temperature, density, velocity and volumetric flow interact throughout a gas pipe.
2. **Gas Physical Property Estimation**
   Selecting methods to estimate density, viscosity, specific heat and thermal conductivity for gas-flow calculations.
3. **Describing Gas Volumetric Flow**
   Distinguishing actual volumetric flow from flow at standard reference conditions to report and model gas quantities consistently.
4. **Joule–Thomson Effect**
   Accounting for gas temperature changes across pressure restrictions when interpreting downstream conditions in FluidFlow.

G02 Gas Flow Pressure Loss and Choking Analysis

An applied FluidFlow course on gas flow analysis: compressible pressure loss, network distribution, and sonic choking.

LEARNING GOALS

This course aims to build practical competence in analyzing gas flow systems in FluidFlow — calculating compressible pressure loss, explaining network flow distribution, and diagnosing sonic choking as a physical capacity limit.

- ✓ **Understand gas flow pressure loss calculations**
- ✓ **Recognize how gas flow split across distribution networks**
- ✓ **Identify choked systems**
- ✓ **Learn to screen systems for choked flow**
- ✓ **Apply choked flow modeling cautions**

COURSE OUTLINE

1. ### Gas Pressure Loss Analysis
   Using FluidFlow’s Duxbury method to account for changing gas properties, friction and acceleration along a pipe.

2. ### Gas Network Analysis
   Examining flow distribution in branched gas headers and evaluating strategies to correct uneven supply.

3. ### Sonic Choking
   Recognizing when gas reaches a sonic-flow capacity limit and identifying the choke location to evaluate mitigation options.

4. ### Choked Flow Modeling and Analysis Tips
   Selecting representative boundary conditions, screening for choking and confirming the condition using model results and warnings.

TRACK 4 OF 7

Control Valves

Liquid · Gas

Control valves modeled as the adjustable pressure-drop element in a control loop: pressure-drop allocation, Cv/Kv sizing, flashing and cavitation screening, and installed-range evaluation against rangeability and turndown.

CV01 Control Valve Modeling and Analysis

Model control valves in FluidFlow, allocate pressure drop, resolve controllability issues, prepare vendor-ready process specifications and evaluate valve performance

LEARNING GOALS

This course will build your ability to model, size, and evaluate control valves in FluidFlow across different hydraulic configurations and operating cases.

Participants will learn how to interpret pressure drop, controllability, valve characteristics, and analyze systems using manufacturer data.

- ✓ **Understand what a control valve is**
- ✓ **Interpret control valve from a hydraulic perspective**
- ✓ **Understand how control valves are modeled in FluidFlow**
- ✓ **Learn preliminary control valve sizing and its importance to detailed vendor sizing**
- ✓ **Effectively allocate control valve pressure drop**
- ✓ **Identify key process data used for developing specifications**
- ✓ **Recognize and address valve sizing issues**
- ✓ **Evaluate systems with manufacturer valve performance data**

COURSE OUTLINE

1. **Control Valve Introduction**
   Understanding how a control valve adjusts flow as the final control element in a process control loop.
2. **Control Valve Hydraulics**
   Interpreting the valve as a variable pressure-drop element that responds to changes in system flow and pressure balance.
3. **Control Valve Sizing**
   Allocating pressure drop and calculating preliminary Cv or Kv to establish the valve capacity required by the system.
4. **Control Valve Modeling Configurations**
   Selecting suitable FluidFlow controller types and boundary conditions to represent the intended control function and maintain a solvable model.

5 **Control Valve + Booster Sizing**
Establishing a pressure-drop basis when valve pressure loss and booster duty must be determined together.

6 **Control Valve Sizing Issues**
Identifying flashing and cavitation and evaluating operating conditions, valve location and vendor requirements.

7 **Developing Control Valve Specifications**
Translating hydraulic results and fluid properties into process data for the valve manufacturer’s final sizing and selection.

8 **Control Valve Selection**
Evaluating manufacturer valve characteristics, opening limits, rangeability and turndown across the full installed operating range.

TRACK 5 OF 7

General Slurry Modeling

Slurry

The entry point into slurry hydraulics: classifying a slurry as settling or non-settling, building the right FluidFlow model type, sizing the pipe against deposition velocity and energy consumption, and correcting centrifugal pump performance for slurry service.

GS01 Introduction to Modeling Slurries

An introductory FluidFlow course on slurry modeling: slurry classification, industrial applications, and modeling approaches.

LEARNING GOALS

Learn to identify slurries and their industrial applications, distinguish settling from non-settling behavior, and select the appropriate FluidFlow modeling approach.

- ✓ Understand slurry definition and industrial applications
- ✓ Differentiate between settling and non-settling slurries
- ✓ Select appropriate FluidFlow modeling approach

COURSE OUTLINE

1. **Slurry Definition and Applications**
   Introducing liquid-solid mixtures and their applications across mining, chemical, food and municipal industries.
2. **Slurry Classification**
   Distinguishing settling from non-settling slurries using available laboratory data and particle-size information.
3. **Slurry Modeling Approaches**
   Selecting FluidFlow’s liquid-only or liquid-solid flow model according to the slurry’s classification.

GS02 Slurry Pipe Characteristic Curve

Analyze slurry pipe characteristic curves in FluidFlow, identify flow regimes and characteristic velocities, and size settling-slurry pipelines using deposition velocity and specific energy consumption criteria.

LEARNING GOALS

Understand slurry pipe characteristic curves and flow regimes, interpret characteristic velocities, and apply deposition velocity and specific energy consumption criteria to design efficient solid-liquid transport systems.

- ✓ Understand pipe characteristic curves for slurries

- ✓ Identify different settling slurry flow regimes
- ✓ Interpret characteristic velocities and their significance
- ✓ Apply deposition velocity criteria
- ✓ Evaluate transport efficiency using SEC metric

COURSE OUTLINE

1. **Slurry Pipe Characteristic Curve**
   Interpret how slurry pressure loss changes with flow velocity and how settling-slurry flow regimes shape the characteristic curve.
2. **Non-Newtonian Flow Pipe Characteristic Curve**
   Examine how non-Newtonian rheology influences pipe friction loss.
3. **Characteristic Velocities**
   Interpret the velocities that mark changes in settling-slurry flow behavior and inform pipeline design.
4. **Deposition Velocity**
   Understand the velocity at which stationary deposits form and its role in selecting slurry pipeline operating conditions.
5. **Specific Energy Consumption**
   Evaluate the energy required to transport solids and use it alongside deposition velocity when sizing slurry pipelines.

GS03 Slurry Centrifugal Pump Modeling

Model centrifugal pumps for slurry service in FluidFlow, assess the effects of non-Newtonian viscosity and solids on performance, and apply appropriate derating methods.

LEARNING GOALS

This course equips you to model and evaluate slurry pump performance in FluidFlow, accounting for non-Newtonian viscosity and internal solids friction loss.

- ✓ Explain impact of viscosity and solids on pump performance
- ✓ Define head and efficiency ratio
- ✓ Compare slurry pump derating methods
- ✓ Configure centrifugal pump inputs for slurry pump modeling
- ✓ Interpret centrifugal pump results and limitations

COURSE OUTLINE

1. **Slurry Influence on Pump Performance**
   Examine how viscosity and solids affect centrifugal pump head, flow and efficiency when modeling slurry service.

2 **Slurry Centrifugal Pump Derating**
Use head and efficiency ratios to quantify changes in pump performance relative to water.

3 **Slurry Pump Derating Methods**
Compare FluidFlow’s derating methods and their data requirements to select an approach for modeling slurry pump performance.

TRACK 6 OF 7

Settling Slurry Modeling

Slurry

Configure settling-slurry inlet boundaries, model deposition velocity and pipe inclination, and select friction-loss correlations suited to the available data and pipe orientation.

SS01 Settling Slurry Inlet Boundaries

Configure settling-slurry inlet boundaries in FluidFlow by defining flow, solids properties, concentration and particle size distribution for your model.

LEARNING GOALS

This course equips you to define settling-slurry inlet boundaries, select an appropriate flow definition, and configure solids properties and particle size distribution using available data.

- ✓ Familiarize with unique inputs for settling slurry models
- ✓ Define settling slurry inlet boundaries
- ✓ Select and apply appropriate flow definition methods
- ✓ Configure solids property and particle size data

COURSE MODULES

1. **Enabling Solids Data in Inlet Boundaries**
   Set the fluid type to Heterogeneous Settling to make solids input fields available at the inlet boundary.
2. **Solids Database**
   Define solids properties in the database for use in settling-slurry calculations.
3. **Slurry Flow Definition**
   Select total slurry, solids-only or carrier-only flow to represent the available inlet flow data.
4. **Slurry Concentration Definition**
   Specify solids concentration by volume or weight to describe the solids content of the slurry.
5. **Particle Size Distribution Data**
   Define particle size distribution from sieve data or approximate it using d_{50} and d_{85} values to represent the solids entering the model.

SS02 Deposition Velocity Modeling

Model deposition velocity in FluidFlow, select suitable correlations and account for pipe inclination to assess operating conditions for settling-slurry transport.

LEARNING GOALS

This course equips you to interpret deposition velocity, select suitable correlations and account for pipe inclination when modeling settling slurries in FluidFlow.

- ✓ Define deposition velocity and its importance
- ✓ Compare different deposition velocity correlations
- ✓ Apply appropriate calculation methods for specific slurries
- ✓ Analyze effects of pipe inclination
- ✓ Configure FluidFlow for accurate deposition velocity modeling

COURSE OUTLINE

1. **Deposition Velocity**
   Understand how deposition velocity helps define operating conditions that avoid stationary solids deposits in slurry pipelines.

2. **Inclined Pipe Deposition Velocity**
   Examine how pipe inclination affects deposition velocity and how FluidFlow accounts for that effect.

3. **Configuring Deposition Velocity Calculations**
   Select deposition velocity and inclined-pipe correction methods in FluidFlow to suit the slurry and application.

SS03 Settling Slurry Friction Loss Modeling

Model settling-slurry friction loss in FluidFlow by selecting correlations suited to the available solids data, flow regime and pipe orientation.

LEANING GOALS

This course equips you to analyze settling-slurry friction losses by applying the additive pressure drop concept and selecting suitable friction-loss models.

- ✓ Understand additive pressure drop concept in slurries
- ✓ Compare different slurry friction loss models
- ✓ Apply appropriate model for specific scenarios
- ✓ Analyze settling slurry pipe friction losses

COURSE MODULES

1. **Additive Pressure Drop Concept**
   Understand settling-slurry friction loss as the sum of carrier-fluid friction loss and the additional loss caused by solids.

2. **Friction Loss Correlations**
   Compare FluidFlow’s settling-slurry correlations and select a method suited to the available data and flow regime.

3 **Non-Horizontal Pipe Friction Loss**

Examine how pipe orientation affects solids-related friction loss and the methods used to model it.

TRACK 7 OF 7

Non-Newtonian Modeling

Non-Newtonian

Model non-Newtonian fluids in FluidFlow by fitting rheology models to property data, applying suitable friction-loss correlations, and evaluating slurry transport efficiency.

NN01 Non-Newtonian Physical Property Modeling

Learn to define non-Newtonian fluid properties in FluidFlow, compare rheology models and apply tabulated data to select a model for your application.

LEARNING GOALS

This course equips you to define non-Newtonian fluid properties in FluidFlow, compare rheology models and fluid behavior, and apply tabulated rheology data.

- ✓ Define physical properties of non-Newtonian liquids
- ✓ Understand four major non-Newtonian rheology models
- ✓ Compare behavior of different non-Newtonian fluid types
- ✓ Apply tabulated rheology data for accurate modeling

COURSE MODULES

1. **Understanding Non-Newtonian Fluids**
   Explore how non-Newtonian fluid viscosity changes under shear and how this affects physical property modeling.
2. **Rheological Models**
   Compare the four rheology models used to represent different non-Newtonian fluid behaviors.
3. **Rheological Data Modeling**
   Use tabulated shear rate and shear stress data to evaluate and select a suitable rheology model.

NN02 Non-Newtonian Friction Loss Modeling

Model non-Newtonian friction losses in FluidFlow using correlations suited to each rheology model, and explore how slurry concentration affects transport efficiency.

LEARNING GOALS

This course equips you to understand how non-Newtonian behavior influences friction loss, apply suitable friction-loss correlations, and develop non-Newtonian models in FluidFlow.

- ✓ Understand how non-Newtonian behavior influence friction loss
- ✓ Familiarize with non-Newtonian friction loss correlations

✓ Use FluidFlow in developing non-Newtonian models

COURSE MODULES

1 **Non-Newtonian Friction Loss**
Explore how non-Newtonian fluid behavior is accounted for in friction-loss calculations.

2 **Rheology Model Friction Loss Correlations**
Examine the friction-loss correlations used for each rheology model in FluidFlow.

GET STARTED

Enroll in Advanced Training On Demand

Purchase any course, or the full 17-module library, and get instant access to start learning right away.

Enroll Now — Instant Access

https://fluidflowinfo.com/advanced-training-on-demand/

MORE WAYS TO GET STARTED

New to FluidFlow? Start with **Free Basic Training** before moving into the Advanced Training On Demand library above.

Already building models? **Start a Free Trial** so you can work through each course's exercises directly in your own flowsheets.

QUESTIONS

Want to know more about the offer before you buy? Email **sales@fluidflowinfo.com**.

Technical support for existing courses or software: **support@fluidflowinfo.com**.

fluidflowinfo.com