

**Introduction to KNIME**

**Course Number:** KNIME-100
**Duration:** 2 days

**Overview**

[KNIME](https://www.knime.com/) is an intuitive, open-source data analytics platform that transforms how you interact with data, offering a visual workbench and sophisticated tools for in-depth exploration, seamless automation, and impactful storytelling. This Introduction to KNIME course prepares attendees to move beyond Excel's constraints and confidently use KNIME to extract actionable insights from data without coding.

**Prerequisites**

An understanding of relational database fundamentals (table relationships, keys, etc.) is helpful but not required. Similarly, knowledge of SQL SELECT statements is helpful in some contexts but not required.

**Materials**

All KNIME training attendees receive comprehensive courseware.

**Software Needed on Each Student PC**

Attendees will not need to install any software on their computers for this class. The class will be conducted in a remote environment that Accelebrate will provide; students will only need a local computer with a web browser and a stable Internet connection. Any recent version of Microsoft Edge, Mozilla Firefox, or Google Chrome will work well.

**Objectives**

* Master KNIME's visual workflow and use intuitive nodes to connect, manipulate, and analyze data efficiently
* Unify diverse data sources, including spreadsheets, databases, and text files
* Craft impactful data visualizations that communicate insights and drive strategic decision-making
* Apply custom functions, M code automation, and workflow optimization for maximum efficiency
* Use basic statistics and modeling tools to extract robust insights from data
* Use KNIME's reporting capabilities to craft professional presentations and share your findings effectively

**Outline**

* Introduction
* Becoming proficient at KNIME and comparing KNIME to Excel
	+ Key differences between Excel and KNIME
	+ How formulas and calculations work in KNIME
	+ When and why KNIME might be the better option
	+ Input and Output operations with Excel files
	+ Filtering and Deleting both Rows and Columns
	+ Equivalent operations in KNIME to VLOOKUP in Excel
	+ Working with Data Types in KNIME
	+ Formatting Excel Tables
* Accessing data, data integration, and ETL operations in KNIME
	+ Reading .CSV and Database files
	+ Orientation to Intermediate level KNIME features
	+ Data Integration
	+ Additional Row and Column transformations
	+ Date and Time Functions
	+ Components and Meta Nodes
	+ Missing Values
* Basic Data Visualizations and Reporting in KNIME
	+ Orientation to data visualizations and reporting in KNIME
	+ When to consider doing visualizations in KNIME
	+ Practice with common chart types in KNIME
	+ Data interactivity with visualizations
	+ Combining visualizations with composite views and interactive dashboards
	+ The Tableau writer node
* Analytics Basics in KNIME
	+ Orientation to basic statistics and modeling in KNIME
	+ Statistical inference and T-test
	+ Analysis of Variance (ANOVA)
	+ Regression basics including scatter plot
	+ Time series basics
* Conclusion