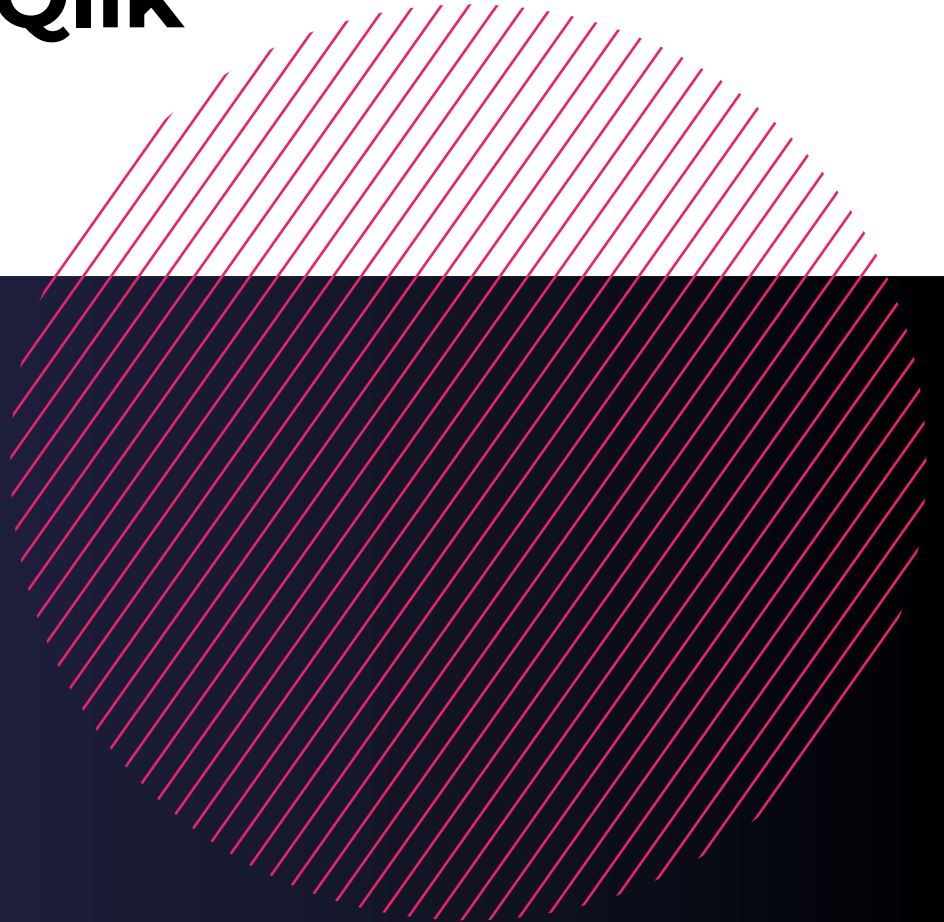
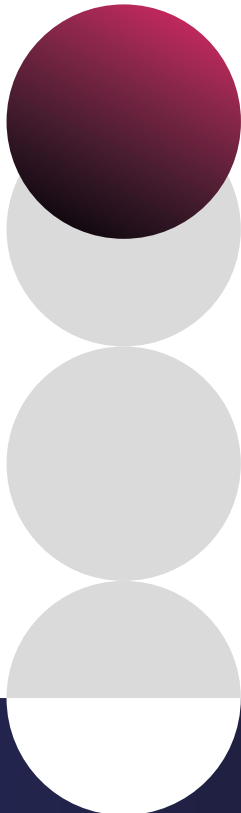


QLIK SENSE COURSE

# Advanced Topics in Design and Development for Qlik

BE-TERNA QLIK SENSE COURSE



# Introduction

---

**Advanced Topics in Design and Development** is a specialized course for experienced Qlik Business Analysts and/or Data Architects.

The course takes you through a combination of demonstrations and exercises to master Set Analysis, other advanced expressions, data modeling, performance and design concepts and incremental data loads. Qlik is not only a powerful BI Visualization tool, but it is also an effective ETL (Extract Transform and Load) software, so on this course you will also learn how to build and debug complex data models and how to optimize data structure in order to achieve good performance.

This course combines theoretical concepts with demonstrations and hands-on exercises to teach the comprehensive calculations and comparison to build thriving and useful visualization, and also to adopt advance concepts in scripting and data modeling, creating effective reporting data models that can support self-service visualization.

To benefit from this course, you should have **at least six months of Qlik application development experience.**

## COURSE PREREQUISITES

- ✓ Completed Create Visualization and Data Modeling with Qlik Sense (or QlikView Designer and Developer) courses
- ✓ Understanding of the Qlik script, Qlik expressions, and functions
- ✓ At least 6 months experience working with Qlik as a business analyst or data architect

## COURSE OBJECTIVES AND INTENDED SKILLS

- ◇ Implement front-end solutions with advanced Qlik expressions and calculations
- ◇ Create advanced set analysis operations, using advanced search expressions and element functions.
- ◇ Perform comparative analysis using alternate states
- ◇ Use advanced Qlik functions and visualizations to perform Pareto (ABC), Basket, and Monte Carlo analyses
- ◇ Identify advanced data modeling and table integration approaches used to develop Qlik applications
- ◇ Transform the data model by applying subroutines to allow script reusability
- ◇ Optimize the data load process by applying incremental loads and create multiple QVD layers
- ◇ Resolve data structure issues and script errors
- ◇ Discuss advanced technical concepts and solutions in real life scenarios with Qlik

## THIS COURSE IS RECOMMENDED FOR THE FOLLOWING USER ROLES:

- Data Architects and Developers
- Data engineer
- Business Intelligence and Reporting Professional

# Business analyst modules

## 01. ADVANCED SET ANALYSIS

### Objectives

1. Discuss the use and definition of data sets for analysis with Qlik using set analysis
2. Explain the set structure, definition and syntax
3. Perform advanced set operations using advanced expressions in search and dollar sign expansion
4. Define complex analysis sets using possible and excluded values in sets with P and E functions

### Topics

- ◇ Analyzing sets in Qlik
- ◇ Advanced set operations
- ◇ Performing calculations in possible and excluded sets

## 02. COMPARATIVE ANALYSIS

### Objectives

1. Discuss the use of alternate states when applying comparative analysis
2. Explain What-if analysis using variables
3. Describe other data analysis techniques: Pareto analysis, Basket analysis, and Monte Carlo methods

### Topics

- ◇ Comparing sets in Qlik
- ◇ What-if analysis
- ◇ Pareto analysis or ABC analysis
- ◇ Basket analysis
- ◇ Monte Carlo analysis

## 03. ADVANCED CALCULATIONS

### Objectives

1. Discuss where and when expressions are calculated
2. Explain the common inter-record calculations in tables
3. Describe the accumulations with aggregations in charts and tables and how to create rankings with the data
4. Discuss various clustering and classification techniques

### Topics

- ◇ Expression calculations
- ◇ Calculations in tables
- ◇ Accumulations with aggregations and rankings
- ◇ Clustering and classifications

# Data architect modules

---

## 01. ADVANCED TRANSFORMATIONS IN SCRIPT

### Objectives

1. Discuss the uses of different load types and Qlik prefixes in script
2. Explain some useful calculations in tables using the script
3. Describe various script flow execution techniques in the data load script

### Topics

- ◇ Data loads and table transformations
- ◇ Script execution flow controls

## 02. INCREMENTAL LOADS WITH QVDS

### Objectives

1. Explain the need of using QVD files to load data
2. Outline the need for incremental loads
3. Describe how an Incremental load strategy can be implemented
4. Demonstrate how to create an incremental load script

### Topics

- ◇ Why QVD files are important
- ◇ QVD Layer
- ◇ Incremental loads

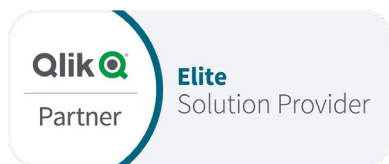
## 03. DEBUGGING AND TROUBLESHOOTING

### Objectives

1. Discuss the debug processes and the initial variable setup in script
2. Explain the system and error variables
3. Learn how to analyze the script logs and the tools that can help you in this process

### Topics

- ◇ Debugging and troubleshooting
- ◇ Initial variable setup
- ◇ Script code for debugging
- ◇ System and error variables
- ◇ Analyze Qlik logs



You want to know more about BE-terna and our business solutions? We're here for you.

[www.be-terna.com](http://www.be-terna.com)