

## Advanced ABAP

Course Code: BC402

Duration: 5 Days

### Goals

- Write more robust ABAP programs
- Assess ABAP programming techniques according to performance aspects and develop high-performance programs
- Develop dynamic ABAP programs"

### Audience

- Developer
- Developer Consultant

### Prerequisites

#### Essential

- BC400
- BC401

### Content

- The SAP Solution Manager Environment
  - Planning the SAP Solution Manager Environment
  - Assigning Composite Roles to SAP Solution Manager System Users
  - Planning the Installation of SAP Extensions and Adapters for Third Party Extensions
- ABAP Basics
  - Describing Packages and Program Types
  - Describing ABAP Data Types and Data Objects
  - Selecting Data from a Single Database Table with Open SQL
- Program Calls and Memory Management
  - Calling Programs Synchronously
  - Describing the ABAP Runtime and Memory Management
  - Using Shared Objects
- Statements, Functions, and Expressions for Simple Data
  - Explaining the Differences Between Statements, Functions, and Expressions
  - Using Numeric Data Types in Arithmetic Expressions
  - Processing Character Strings and Byte Strings Using Classical Options
  - Processing Character Strings and Byte Strings Using Functions and Expressions
- Internal Tables
  - Using Standard, Sorted, and Hashed Tables
  - Using Special Techniques with Internal Tables
  - Using Data References and Field Symbols
  - Using Inline Declarations and Table Expressions
- Dynamic Programming
  - Explaining the Dynamic Programming Techniques of ABAP
  - Using Dynamic Statements and Dynamic Calls
  - Using Generic Data Types
  - Describing Data Types, Data Objects, and Objects at Runtime
  - Creating Data Types, Data Objects, and

## Objects at Runtime

- ABAP Open SQL
  - Describing the Technical Background of Database Accesses with Open SQL
  - Implementing Complex WHERE Conditions and Special INTO Clauses
  - Processing and Aggregating Datasets on the Database
  - Selecting Data from Multiple Database Tables
  - Explaining Additional Techniques for Reading from Multiple Database Tables
  - Accessing Large Objects (LOBs) on the Database
  - Using New Open SQL
- Analysis and Testing
  - Defining and Activating Checkpoints
  - Using the ABAP Trace
  - Using the SQL Trace
- Best Practices for ABAP
  - Avoiding Common Errors in ABAP Programming
  - Creating Readable and Easy-to-Maintain ABAP Programs
  - Optimizing the Runtime of ABAP Applications
  - Avoiding Slow Database Accesses