

BC402

Advanced ABAP

COURSE OUTLINE

Course Version: 18

Course Duration:

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Typographic Conventions

American English is the standard used in this handbook.

The following typographic conventions are also used.

This information is displayed in the instructor's presentation	
Demonstration	
Procedure	
Warning or Caution	
Hint	
Related or Additional Information	
Facilitated Discussion	
User interface control	<i>Example text</i>
Window title	<i>Example text</i>

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Course Overview

TARGET AUDIENCE

This course is intended for the following audiences:

- Development Consultant
- Developer

Lesson 1: Moving from Statements to Expressions and Functions

Lesson Objectives

After completing this lesson, you will be able to:

- Explain the differences between statements, expressions, and functions

Lesson 2: Using ABAP Data Types and Data Objects

Lesson Objectives

After completing this lesson, you will be able to:

- Type data objects
- Use global and local data objects

Lesson 3: Reading Data from Only One Database Table with Open SQL

Lesson Objectives

After completing this lesson, you will be able to:

- Select data from a single database table with Open SQL

Lesson 1: Calling Programs Synchronously

Lesson Objectives

After completing this lesson, you will be able to:

- Call programs synchronously

Lesson 2: Describing the ABAP Runtime and Memory Management

Lesson Objectives

After completing this lesson, you will be able to:

- Generate and activate programs
- Explain the memory management of user sessions
- Transfer data between programs
- Analyze the memory management of deep data objects

Lesson 3: Using Shared Objects

Lesson Objectives

After completing this lesson, you will be able to:

- Explain shared objects
- Use shared objects

Lesson 1: Using Numeric Data Types in Arithmetic Expressions

Lesson Objectives

After completing this lesson, you will be able to:

- Use arithmetic expressions

Lesson 2: Explaining Statements for Processing Character Strings and Byte Strings

Lesson Objectives

After completing this lesson, you will be able to:

- Process strings using ABAP statements
- Use logical operators
- Use date and time fields

Lesson 3: Processing Character Strings and Byte Strings Using Functions and Expressions

Lesson Objectives

After completing this lesson, you will be able to:

- Process strings using functions and expressions
- Process strings using regular expressions

Lesson 1: Using Standard, Sorted, and Hashed Tables

Lesson Objectives

After completing this lesson, you will be able to:

- Explain the differences between standard, sorted, and hashed tables
- Work with internal tables

Lesson 2: Using Special Techniques with Internal Tables

Lesson Objectives

After completing this lesson, you will be able to:

- Use special techniques with internal tables
- Use secondary keys for internal tables

Lesson 3: Using Table Functions and Expressions

Lesson Objectives

After completing this lesson, you will be able to:

- Use table functions and expressions

Lesson 4: Using Data References and Field Symbols

Lesson Objectives

After completing this lesson, you will be able to:

- Use data references and field symbols

Lesson 1: Explaining the Dynamic Programming Techniques of ABAP

Lesson Objectives

After completing this lesson, you will be able to:

- Explain the dynamic programming techniques of ABAP

Lesson 2: Using Dynamic Statements and Dynamic Calls

Lesson Objectives

After completing this lesson, you will be able to:

- Define parts of ABAP statements at runtime
- Call procedures, methods, and programs dynamically
- Generate programs at runtime

Lesson 3: Using Generic Data Types

Lesson Objectives

After completing this lesson, you will be able to:

- Explain generic data types of ABAP
- Use generic data types
- Access data objects dynamically
- Use generically typed data references

Lesson 4: Describing Data Types, Data Objects, and Objects at Runtime

Lesson Objectives

After completing this lesson, you will be able to:

- Explain Runtime Type Identification (RTTI)
- Describe data types and data objects at runtime
- Describe object types and objects at runtime

Lesson 5: Creating Data Types, Data Objects, and Objects at Runtime

Lesson Objectives

After completing this lesson, you will be able to:

- Create objects at runtime
- Create data objects at runtime
- Create data types at runtime

Lesson 1: Describing the Technical Background of Database Accesses with Open SQL

Lesson Objectives

After completing this lesson, you will be able to:

- Explain the architecture of database accesses
- Explain database indices
- Explain SAP table buffering

Lesson 2: Processing and Aggregating Datasets on the Database

Lesson Objectives

After completing this lesson, you will be able to:

- Request ordered or condensed datasets from the database
- Perform calculations on the database

Lesson 3: Implementing Complex WHERE Conditions and Special INTO Clauses

Lesson Objectives

After completing this lesson, you will be able to:

- Filter datasets selected from the database using the WHERE clause
- Use different types of data objects as the target for SELECT statements
- Read large volumes of data from the database

Lesson 4: Using the Features of the New Open SQL Syntax

Lesson Objectives

After completing this lesson, you will be able to:

- Use Expressions in Open SQL

Lesson 5: Selecting Data from Multiple Database Tables

Lesson Objectives

After completing this lesson, you will be able to:

- Identify the disadvantages of nested selects
- Use ABAP joins and database views

Lesson 6: Explaining Additional Techniques for Reading from Multiple Database Tables

Lesson Objectives

After completing this lesson, you will be able to:

- Explain special techniques for reading from multiple database tables
- Use explicit buffering techniques

Lesson 1: Defining and Activating Checkpoints

Lesson Objectives

After completing this lesson, you will be able to:

- Define checkpoints
- Activate checkpoints

Lesson 2: Using the ABAP Trace

Lesson Objectives

After completing this lesson, you will be able to:

- Use the ABAP trace

Lesson 3: Using the SQL Trace

Lesson Objectives

After completing this lesson, you will be able to:

- Use the SQL trace

Lesson 4: Using the SQL Monitor

Lesson Objectives

After completing this lesson, you will be able to:

- Use the SQL Monitor