



SAP ABAP S/4HANA Course Curriculum

Course Overview

The TechScholarss SAP ABAP Masterclass is a structured, job-focused program covering SAP ABAP from programming fundamentals through reports, dialog programming, data transfer, forms, enhancements, interfaces, Object-Oriented ABAP, workflow and SAP development administration concepts. The curriculum is based on the TechScholarss SAP ABAP training curriculum, including core ABAP programming, Dictionary, reports, Module Pools, BDC, SAP Scripts, Smart Forms, BAPI, BADI, IDoc, ALE, RFC, ALV, OOABAP, LSMW, Workflow, CTS and Logical Database topics.

Course Objectives

- Understand SAP, ERP, SAP architecture and the role of ABAP.
- Develop a strong foundation in ABAP syntax, data types, statements and control structures.
- Work with ABAP Dictionary objects such as tables, data elements, domains, views, search helps and lock objects.
- Use structures, internal tables, field symbols and modularization techniques effectively.
- Build classical, interactive and ALV reports with selection screens.
- Understand Module Pool and Dialog Programming with screens, flow logic, table controls and tab strips.
- Perform data-transfer activities using BDC and LSMW concepts.
- Create and work with SAP Scripts and Smart Forms.
- Understand enhancements, user exits, customer exits and BADIs.
- Work with BAPIs, IDocs, ALE and RFC-based interfaces.
- Understand Object-Oriented ABAP concepts and ALV development.
- Understand Workflow, CTS/Transport Organizer and other ABAP development utilities.

Program Highlights

- End-to-end SAP ABAP curriculum
- Practical programming and debugging focus
- Reports, ALV and Dialog Programming
- Data migration and interface concepts
- Forms and enhancement framework
- OOABAP and enterprise integration
- Interview-oriented technical preparation

Module 1: Introduction to SAP

Tools Covered: SAP, ERP, R/3 Architecture

- Introduction & Overview of SAP
- SAP modules at a glance
- Introduction to ERP
- Introduction to SAP & R/3 Architecture
- Introduction to ABAP

Module 2: SAP ABAP Overview

Tools Covered: SAP GUI, ABAP Editor

- Logon to SAP Environment
- Transaction Codes and multitasking commands
- Debugging errors and steps for creating a program
- Elements in R/3 screen



- Output statements and operators in ABAP
- Data, parameter and constant statements
- Data types and data objects
- Text elements, string operations and control statements
- Field strings

Module 3: ABAP Dictionary Concepts

Tools Covered: SE11, ABAP Dictionary

- Tables, Data Elements and Domains
- Transparent, Pooled and Clustered Tables
- Buffering and Indexes
- Structures, Table Types and Type Pools
- Views, Search Helps and Lock Objects

Module 4: Data Types, Loops & Branches

Tools Covered: ABAP Editor

- Character, Integer and Numeric Character
- Floating Point and Packed Decimals
- Time, Date and String data types
- DO, DO n times and WHILE loops
- IF, IF ELSE, IF ladder and CASE
- Small ABAP programs and factorial program
- Indentation, Code Inspector and Extended Program Check

Module 5: ABAP Programming Basics

Tools Covered: Open SQL, Debugger

- I/O Statements and formatting commands
- String and date operations and system fields
- Field strings and text elements
- Open SQL statements and performance issues
- Messages – creating and calling messages
- Modularization using Subroutines, Function Modules and Includes
- Field Symbols
- Debugging with breakpoints and watchpoints
- Extended syntax check
- Runtime Analysis and Performance Trace

Module 6: Structures & Internal Tables

Tools Covered: ABAP Editor

- Overview of structures
- Creation of similar and different structures
- Structures with extra fields
- Overview of internal tables
- Creation of similar and different internal tables
- Internal tables with extra fields
- Modify and Delete operations
- Sorting and searching techniques



Module 7: Message Classes & Selection Screens

Tools Covered: SE91, Selection Screens

- Message Class introduction
- Message types
- Calling message classes in Report and Dialog programs
- PARAMETER statement
- SELECT-OPTIONS statement
- SELECTION-SCREEN statement
- Screen table and its fields
- Dynamic screen modification using MODIF ID

Module 8: Modularization Techniques & ABAP Query

Tools Covered: SQ01/SQ02, Function Modules

- Overview of modularization
- Macros, Includes, Subroutines and Function Modules
- ABAP Query
- User Group and InfoSet
- Query, Lists and creating a transaction

Module 9: Reports

Tools Covered: Classical, Interactive, ALV Reports

- Classical Report Events
- Control Level Commands – AT FIRST, AT NEW etc.
- Selection screen parameters
- SELECT-OPTIONS and variants
- Selection screen designing
- Interactive report events
- Menu Painter – designing and calling GUI Status
- System fields of reports
- ALV Reporting

Module 10: Module Pools & Dialog Programs

Tools Covered: Screen Painter, Module Pool

- Overview of Module Pools
- Creation of Create and Display buttons
- Subscreens
- Tab Strips
- Table Controls
- Save button to update database
- ABAP Memory and SAP Memory
- LUW and Update Bundling technique
- Screens, flow-logic events and Module Pool
- I/O fields, radio buttons and check boxes
- SET SCREEN, CALL SCREEN and LEAVE TO SCREEN
- SUBMIT and CALL TRANSACTION
- Subscreens and modal screens



Module 11: File Handling & Data Transfer

Tools Covered: BDC, Batch Input

- Data Transfer scenarios and methods
- BDC Session Method – creating, processing, analyzing and correcting errors
- Recording Technique
- BI Session features, status and OK codes
- CALL TRANSACTION method – options, error tracing and correction
- Background Processing – creating, scheduling and monitoring jobs

Module 12: SAP Scripts & Smart Forms

Tools Covered: SE71, Smart Forms

- SAP Script form designing – pages, windows, page windows and paragraphs
- SAP Script symbols and control commands
- Standard Text and Styles
- Inserting TIFF and Bitmap logos
- Modifications to forms and print programs
- Debugging and copying forms
- Smart Forms and form logic
- Calling a form from a print program
- Page, Table, Loop and other node types
- Difference between SAP Script and Smart Forms

Module 13: Enhancements & BAPI

Tools Covered: SMOD/CMOD, BAPI

- Changing SAP Standard
- User Exits and Customer Exits
- Function, Menu and Screen Exits
- BAdI overview
- SAP Business Objects
- Business Object Builder and BOR
- Features and applications of BAPI
- Creating Business Object types
- Developing BAPIs
- Working with standard BAPIs

Module 14: BAdI & Enhancement Framework

Tools Covered: SE18/SE19

- Defining a BAdI
- Implementing a BAdI
- Enhancement Points
- Explicit and Implicit Enhancements

Module 15: IDoc & ALE

Tools Covered: WE30, WE81, ALE

- Features and structure of IDoc
- IDoc Type and Message Type



- Segment definition and components
- Creating Segments
- Creating IDoc Types – Basic Type and Extension
- Creating Message Types and Process Codes
- Developing Selection and Posting programs
- IDoc Enhancements
- Distributed Systems
- ALE Services and features
- ALE Inbound and Outbound process
- ALE Configuration – Logical Systems, RFC, Model View, Port and Partner Profiles
- ALE Distribution Scenarios

Module 16: RFC & ALV (ABAP List Viewer)

Tools Covered: RFC, ALV Grid/List

- Introduction to RFC
- Communication mechanisms through RFC
- ABAP interfaces – RFC, tRFC and ARFC
- Difference between tRFC and ARFC
- Overview of ALV
- ALV List Display
- ALV Grid Display
- ALV Catalogue Creation

Module 17: Object-Oriented ABAP (OOABAP)

Tools Covered: SE24, Classes & Interfaces

- Object-Oriented ABAP Overview
- Defining and implementing a Class
- Encapsulation and implementation hiding
- Object initialization and clean-up
- Inheritance
- Polymorphism
- Dynamic method call binding
- Interface inheritance vs implementation inheritance
- Inheritance vs composition

Module 18: LSMW

Tools Covered: LSMW, Data Migration

- Overview of LSMW
- BDC Structure & Input Methods
- Creation of Project
- Creation of Sub Project & Object Type
- Creating Batch Input using Recording Mode
- Steps to Create LSMW

Module 19: Workflow

Tools Covered: SWDD, Workflow Builder

- Overview of Workflow



- Creation of Prefix
- Creation of Standard Tasks
- Creation of Standard Template
- Creation of Workflow Builder

Module 20: Miscellaneous SAP ABAP Topics

Tools Covered: SE09/SE10, CTS

- Correction & Transport Request (CTS)
- Transport Organizer
- Workbench Request
- Task Creation
- Release Objects
- SAP Memory & ABAP Memory
- Logical Database

Tools & Technologies Covered

Area	Coverage
ABAP Development	ABAP Editor, syntax, data types, statements, debugging and performance analysis
ABAP Dictionary	Tables, structures, domains, data elements, views, search helps and lock objects
Reports & ALV	Classical, interactive and ALV reports; selection screens
Dialog Programming	Module Pools, screens, flow logic, subscreens, table controls and tab strips
Data Transfer	BDC, LSMW, recording and background processing
Forms	SAP Scripts and Smart Forms
Enhancements	User exits, customer exits, BAdIs and enhancement points
Interfaces	BAPI, IDoc, ALE and RFC
OOABAP	Classes, inheritance, polymorphism, interfaces and composition
Workflow & CTS	Workflow Builder, tasks, CTS and Transport Organizer

Practical Project Scenarios

- ABAP Report Development – build a business-oriented report with selection criteria and structured output.
- ALV Reporting – create an ALV-based report for filterable and sortable business data.
- Dialog Programming – design a Module Pool transaction with screens, buttons, table control and database update.
- Data Transfer – practice a BDC/LSMW-based data migration scenario including validation and error handling.
- Forms Development – design a SAP Script or Smart Form and connect it with a print program.
- Enhancement Scenario – implement an exit/BAdI or enhancement point for custom business logic.
- Interface Scenario – understand an IDoc/ALE/RFC/BAPI-based integration flow.
- OOABAP Scenario – design a class-based ABAP solution using object-oriented principles.



Resume Building & Interview Preparation

- ABAP programming fundamentals and syntax revision
- ABAP Dictionary and internal-table interview questions
- Classical, interactive and ALV reporting scenarios
- Module Pool and Dialog Programming questions
- BDC, LSMW and data-transfer scenarios
- SAP Script and Smart Forms concepts
- Enhancements, User Exits, Customer Exits and BAdI
- BAPI, IDoc, ALE and RFC integration concepts
- OOABAP concepts and scenario-based questions
- CTS, Transport Organizer and Workflow fundamentals

Career Opportunities After This Program

- SAP ABAP Developer
- SAP ABAP Consultant
- SAP S/4HANA ABAP Developer
- SAP ABAP Support Consultant
- SAP Technical Consultant
- SAP Integration / Interface Developer
- SAP ABAP Development & Maintenance Specialist

Why Choose TechScholarss?

- Structured module-wise SAP ABAP curriculum
- Practical programming and development orientation
- Focus on real-world SAP development scenarios
- Strong coverage of reports, interfaces and enhancements
- Interview and career preparation
- Professional training environment under TechScholarss Education & Training Services Pvt Ltd
- Expert Trainers
- Flexible Online & Offline Batches
- Internship Support
- Placement Assistance
- Industry Certification

Certification

Students will receive a TechScholarss SAP ABAP Certification after successful completion of the program, subject to the institute's completion criteria.

Program Outcome

By the end of this program, students will be able to understand and work with SAP ABAP programming fundamentals and Dictionary objects, build classical, interactive and ALV reports, develop Module Pool and Dialog Programming, perform BDC and LSMW-based data transfer, create SAP Scripts and Smart Forms, implement enhancements, user exits and BAdIs, work with BAPI, IDoc, ALE and RFC interfaces, apply Object-Oriented ABAP concepts, and support real-world SAP ABAP development and maintenance activities.