



SAP ABAP on HANA — Complete Course Content

WC Skills • World Class Skills Institute

Duration	8 Weeks
Target Audience	ABAP developers preparing for HANA-centric development
Prerequisites	Working ABAP knowledge and basic SQL.

What this document contains

A module-wise training roadmap covering concepts, hands-on labs, project work, assessment checkpoints and interview preparation. The syllabus is designed as a structured course plan for classroom or live-online delivery.

Course Objectives & Learning Outcomes

By the end of this course, learners should be able to explain the core concepts, perform the practical tasks listed in the labs, troubleshoot common scenarios, document their work and complete the capstone with a professional implementation approach.

- Understand the architecture, terminology and end-to-end workflow of the subject.
- Perform guided hands-on exercises using the relevant tools and development/administration environment.
- Apply troubleshooting, testing, documentation and best-practice techniques.
- Build a portfolio-ready capstone demonstrating practical competency.
- Prepare for technical interviews with scenario-based questions and implementation discussions.

Detailed Module-wise Curriculum

Module 1: HANA & Code Pushdown Fundamentals

- In-memory column store concepts
- Code pushdown vs application-layer processing
- Row vs column storage
- Set-based processing
- HANA-aware ABAP design

Hands-on Lab: Lab: identify an ABAP report that can benefit from pushdown.

Module 2: CDS Data Modeling

- CDS entities and annotations
- Associations and cardinality
- Parameters, calculated fields and aggregations
- Authorization and analytical annotations
- CDS naming and layering

Hands-on Lab: Lab: build a CDS model for sales reporting.

Module 3: AMDP & SQLScript

- AMDP classes and methods
- SQLScript syntax and table variables
- Input/output parameters
- Error handling and testing
- Choosing CDS vs AMDP

Hands-on Lab: Lab: implement a calculation-heavy query with AMDP.

Module 4: Performance Optimization

- ST05 SQL Trace
- SAT runtime analysis
- SQL Monitor concepts
- Avoiding SELECT in LOOP and unnecessary data transfer
- Plan/cache awareness

Hands-on Lab: Lab: measure a slow report before and after optimization.

Module 5: Advanced CDS

- Consumption views and analytical queries
- Associations and path expressions
- Date/time and currency semantics
- Metadata extensions
- Service exposure concepts

Hands-on Lab: Lab: layer interface, projection and consumption views.

Module 6: RAP & OData Awareness

- RAP architecture
- Behavior definitions and implementations
- Service definitions and bindings
- Transactional processing concepts
- Fiori Elements integration

Hands-on Lab: Lab: design a simple managed RAP business object.

Module 7: Migration & Clean Core

- Custom code analysis
- Simplification awareness
- Extension principles
- Reducing modifications
- ATC and quality gates

Hands-on Lab: Lab: create a remediation plan for legacy custom code.

Module 8: Capstone & Interview Preparation

- End-to-end CDS/AMDP scenario
- Performance evidence and benchmarking
- Testing and transport
- Technical documentation
- Interview questions and coding exercises

Hands-on Lab: Lab: present an optimized HANA-native solution.

Practical Delivery Plan

Phase	Focus	Expected Evidence
1	Concept + demonstration	Notes, diagrams and guided exercises
2	Hands-on practice	Working configuration/code and screenshots/logs
3	Troubleshooting	Issue reproduction, diagnosis and resolution notes
4	Mini project	Functional solution with test cases
5	Capstone	End-to-end project, documentation and presentation

Assessment & Certification Readiness

Recommended assessment pattern: module quizzes (20%), practical labs (30%), mini project (20%), capstone (20%) and interview/viva (10%). Completion certificates, placement support and any certification claims should follow the institute's current published policy and the relevant vendor's certification rules.

Capstone Requirements

- Problem statement and scope
- Architecture/process diagram
- Implementation or configuration
- Test cases and results
- Troubleshooting notes
- User/technical documentation
- Final presentation and interview questions

Interview Preparation Topics

Learners should be able to answer architecture questions, explain the difference between key concepts, troubleshoot a real scenario, justify design choices, discuss performance/security considerations and walk through the capstone from requirement to deployment/support.

Recommended Learning Resources

Use official product documentation and current vendor guidance for version-specific commands, configuration steps and certification requirements. Validate training examples in a non-production environment before applying them to customer systems.