



SAP HANA Database — Complete Course Content

WC Skills • World Class Skills Institute

Duration	8 Weeks
Target Audience	Database administrators, developers and SAP technical learners
Prerequisites	SQL and database fundamentals.

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 Architecture

- In-memory computing
- Indexserver and system services
- Tenants and system database
- Column store and delta merge
- Persistence and savepoints

Hands-on Lab: Lab: map the main HANA services and responsibilities.

Module 2: SQL & Data Modeling

- SQL basics and advanced queries
- Tables, views and schemas
- Joins and aggregations
- Calculation views awareness
- Data types and functions

Hands-on Lab: Lab: build analytical queries over a sample dataset.

Module 3: HANA Administration

- Users and privileges
- System configuration
- Service monitoring
- Database lifecycle concepts
- Housekeeping

Hands-on Lab: Lab: create an admin runbook.

Module 4: Backup & Recovery

- Data and log backups
- Backup destinations
- Recovery scenarios
- Point-in-time recovery concepts
- Validation and restore testing

Hands-on Lab: Lab: create a recovery checklist.

Module 5: Performance

- Expensive statements
- Plan analysis
- Memory and CPU monitoring
- Delta merge
- SQL optimization

Hands-on Lab: Lab: profile and optimize a slow query.

Module 6: Security & Connectivity

- Authentication and authorization
- Auditing concepts
- Encryption awareness
- Client connectivity
- SAP application integration

Hands-on Lab: Lab: design least-privilege database access.

Module 7: High Availability & Operations

- System replication concepts
- HA architecture
- Monitoring and alerting
- Upgrade planning
- Operational checklists

Hands-on Lab: Lab: prepare an HA/DR readiness assessment.

Module 8: Capstone & Interview

- Health-check dashboard requirements
- Troubleshooting methodology
- Backup/recovery drill
- Documentation
- Interview and scenario questions

Hands-on Lab: Lab: deliver a HANA administration portfolio.

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.