Jaipur Engineers
Your One-Stop IT & Staffing Ecosystem

JAVA

Spring Framework & Hibernate

Spring Core • Spring MVC • Spring Boot • Hibernate ORM • JPA



COMBINED FRAMEWORK MODULE

₹8,000

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Spring Framework & Hibernate

Syllabus at a glance

01

Spring Core and dependency injection

02

Spring Boot and Spring MVC

03

Hibernate and JPA entity mapping

04

Queries and transactions

05

REST and persistence integration

06

Testing and application delivery

PORTFOLIO PROJECT

Course Enrolment API

Build a Spring Boot enrolment service, persist records with Hibernate and verify transaction behaviour.

Spring Framework & Hibernate

Core concepts

01

Spring Core and dependency injection

Configure Spring beans, use constructor injection and organise dependencies through interfaces.

02

Spring Boot and Spring MVC

Set up starters and profiles. Trace controller mapping, request handling and response validation.

03

Hibernate and JPA entity mapping

Map entities, identifiers and relationships and inspect the resulting schema.

TOOLS & TOPICS

Spring Core • Spring MVC • Spring Boot • Hibernate ORM • JPA

Spring Framework & Hibernate

Applied skills

04

Queries and transactions

Use repositories, JPQL and transaction boundaries. Review lazy loading and rollback.

05

REST and persistence integration

Connect controllers, services and the persistence layer. Validate data and map errors to appropriate responses.

06

Testing and application delivery

Test endpoints and persistence, apply configuration by environment and package the service.

TOOLS & TOPICS

Spring Core • Spring MVC • Spring Boot • Hibernate ORM • JPA

Spring Framework & Hibernate

Portfolio project

Course Enrolment API

Build a Spring Boot enrolment service, persist records with Hibernate and verify transaction behaviour.

ILLUSTRATIVE PROJECT SKETCH

SCENARIO		EXPECTED EVIDENCE
01>	**Model**	Sample input or fixture
02>	**Execute**	Record the observed result
03>	**Verify result**	Compare against expectations

Model the domain

Identify data, actions and boundaries before writing the first class.

Check a failure

Write a test for a rejected operation and confirm the data stays consistent.

A runnable Java project, test results and notes on design and error handling.

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Project checklist

Use these checks to prepare your project demo or portfolio handoff.

01

Map an enrolment

Show how enrolment, course and student records are related in the model.

02

Exercise a failed update

Verify the records remain consistent after a failed or rejected enrolment.

03

Hand over the service

Provide launch instructions, API request examples and matching database checks.

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Course fees

COMBINED FRAMEWORK MODULE

₹8,000

Contact admissions for current batches, class timings and enrolment details.

JAIPUR ENGINEERS ADMISSIONS

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SCAN FOR MAP

View course details online

Spring Framework & Hibernate

Course content

MODULES 01–02

01 Spring Core and dependency injection

Lessons & practice

- IoC container and beans
- Constructor injection
- Configuration, scopes and lifecycle

HANDS-ON

Inject a course repository and swap in an in-memory implementation for a test.

02 Spring Boot and Spring MVC

Lessons & practice

- Spring Boot starters and profiles
- Spring MVC request mapping
- Controllers, DTOs and validation

HANDS-ON

Create an enrolment endpoint and check the structured response when a field is missing.

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MODULES 03–04

03 Hibernate and JPA entity mapping

Lessons & practice

- JPA entities and identifiers
- Hibernate relationships and mappings
- Schema and migration basics

HANDS-ON

Map courses, students and enrolments and verify the relationships in the database.

04 Queries and transactions

Lessons & practice

- JPQL and repository queries
- Transactional service methods
- Fetch strategies and rollback

HANDS-ON

Query course enrolments and verify rollback when a planned update fails.

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Course content

MODULES 05–06

05 REST and persistence integration

Lessons & practice

- Controller, service and persistence layers
- REST errors and validation
- Database integration

HANDS-ON

Trace a valid HTTP request through Spring and show the resulting Hibernate record.

06 Testing and application delivery

Lessons & practice

- Controller and persistence testing
- Environment-specific settings
- Application packaging and logs

HANDS-ON

Run tests for success and validation failure, then package the service with launch instructions.