

QA TESTING

COURSE SYLLABUS

Module 1

Introduction to Software Testing

- Understand the role of QA in the Software Development Lifecycle (SDLC & STLC)
- Learn the difference between Manual & Automation Testing
- Get familiar with testing types: Functional, Regression, Smoke, UAT, etc.

Module 2

Manual Testing Fundamentals

- Writing effective test cases and test scenarios
- Bug tracking and defect lifecycle management
- Hands-on with test documentation (Test Plan, Traceability Matrix)

Module 3

Bug Tracking Tools

- Log and track defects using tools like JIRA, Bugzilla, Mantis
- Understand issue lifecycle and reporting structure

Module 4

Test Management Tools

- Manage test cases and test suites using TestRail, Zephyr, or QTest

Module 5

Automation Testing Essentials

- Introduction to Selenium and WebDriver
- Writing automation scripts in Java or Python
- Automation frameworks: TestNG, JUnit, Cucumber (BDD)

Module 6

Scripting Basics for Automation

- Learn basics of scripting languages (Java / Python / JavaScript)
- Writing reusable and maintainable automation test scripts

Module 7

Real-Time Project Scenarios

- Work on live/simulated projects with real-time bugs
- End-to-end test case execution from requirement to defect closure

Module 8

Agile Testing & QA in DevOps

- Understand Agile methodology and sprint-based testing
- Introduction to CI/CD tools (Jenkins) for automation integration

Module 9

API Testing & Database Testing

- Basics of API testing using Postman
- Validating test requests with JSON/XML responses
- Backend testing using SQL queries
- Validate data integrity, joins, and transactions

Module 10

Mobile App Testing

- Manual & automation testing for Android/iOS apps
- Introduction to Appium and BrowserStack