

Advanced Level Test Automation Engineering

2.0 Course

Course Duration: 40 Hrs.

Course Code: AL-TAE-2.0

Course Overview

The **Advanced Level Test Automation Engineering 2.0** course is designed for experienced testing and QA professionals who want to master modern test automation practices. This course goes beyond basic automation by focusing on scalable automation frameworks, continuous testing, integration with CI/CD pipelines, and automation for complex systems. It equips participants with advanced technical and strategic skills required to design, implement, and maintain robust automation solutions in fast-paced development environments.

What You'll Learn?

By completing this course, you will be able to:

- Design and architect scalable test automation frameworks
- Implement automation at unit, API, UI, and system levels
- Integrate automated tests into CI/CD pipelines
- Apply automation best practices for maintainability and reliability
- Automate non-functional testing scenarios
- Use automation tools effectively for modern applications
- Improve overall test efficiency and quality through automation

Target Audience

This course is ideal for:

- Test Automation Engineers
- Senior QA Engineers and Technical Testers
- SDETs and Quality Engineers
- Software Developers involved in testing
- Testing professionals aiming to advance their automation expertise

Pre-Requisites

Participants should have:

- Strong foundation in software testing concepts
- Hands-on experience with test automation tools
- Basic programming knowledge (such as Java, Python, or JavaScript)
- Understanding of agile and DevOps practices

Course Content

Module 1: Advanced Automation Engineering Concepts

- Evolution of test automation
- Role of automation in quality engineering
- Automation challenges and solutions

Module 2: Automation Framework Design and Architecture

- Framework types and design patterns
- Reusability, scalability, and maintainability

- Handling complex test scenarios

Module 3: API and Service-Level Automation

- REST and SOAP testing concepts
- API automation tools and strategies
- Data-driven and contract testing

Module 4: UI and Cross-Platform Automation

- Web and mobile automation strategies
- Cross-browser and cross-device testing
- Synchronization and stability techniques

Module 5: Continuous Testing and CI/CD Integration

- Integrating automation with CI/CD pipelines
- Test execution, reporting, and feedback loops
- Environment and test data management

Module 6: Non-Functional and Intelligent Automation

- Performance and security automation basics
- Automation using AI-assisted tools
- Future trends in test automation