

A **Diploma in Software Testing** is a specialized program Droit Academy prepares individuals to work as software testers or quality assurance professionals. The course covers both the theoretical and practical aspects of software testing, teaching students how to identify and fix issues in software products, ensuring they meet the desired quality standards before being released to end users.

Key Topics Covered in a Diploma in Software Testing:

1. **Introduction to Software Testing:**
 - Basics of software testing, its importance, and role in the software development life cycle (SDLC).
 - Types of testing: functional vs non-functional, manual vs automated testing.
2. **Software Development Life Cycle (SDLC):**
 - Understanding the different phases of software development: requirements gathering, design, development, testing, deployment, and maintenance.
 - The role of testing within each phase of SDLC.
3. **Types of Software Testing:**
 - **Manual Testing:** Testing software manually without automation tools.
 - Includes unit testing, integration testing, system testing, acceptance testing, etc.
 - **Automated Testing:** Using automated tools and scripts to perform tests.
 - Tools include Selenium, QTP, LoadRunner, JMeter, etc.
4. **Test Case Design and Execution:**
 - Writing effective test cases to check the functionality of software.
 - Understanding test conditions, inputs, expected results, and steps for executing tests.
5. **Bug Tracking and Reporting:**
 - Identifying defects in software and using bug tracking tools (e.g., JIRA, Bugzilla, Trello) to log issues.
 - Writing clear and concise bug reports for development teams.
6. **Performance Testing:**
 - Techniques for testing the performance, load, and scalability of software.
 - Using tools like JMeter and LoadRunner to simulate heavy user traffic and assess system behavior.
7. **Security Testing:**
 - Identifying vulnerabilities in software to protect against security threats.
 - Techniques like penetration testing, SQL injection testing, and network security testing.
8. **Regression Testing:**
 - Ensuring that new code changes do not negatively impact the existing functionality of the software.
9. **Test Automation Tools:**
 - Hands-on training on popular automated testing tools such as Selenium, QTP, TestComplete, and others.
 - Writing and executing automated test scripts.
10. **Quality Assurance (QA) Methodologies:**
 - Understanding different testing methodologies like Agile, Waterfall, Scrum, and DevOps.
 - Involvement of testers in Agile sprints, daily stand-ups, and sprint planning.
11. **Mobile Application Testing:**

- Testing mobile applications for different platforms like iOS and Android.
 - Tools for mobile testing: Appium, Selenium for mobile, etc.
- 12. Database Testing:**
- Validating the data in databases through query testing, data integrity, and consistency.

Duration: 6 -12 months

Career Opportunities After a Diploma in Software Testing:

1. **Software Tester / Quality Analyst (QA)**
2. **Automation Tester**
3. **Performance Tester**
4. **Test Lead / Test Manager**
5. **Quality Assurance Engineer**
6. **DevOps Engineer (with testing focus)**
7. **Test Engineer**
8. **Security Tester**
9. **Mobile App Tester**
10. **Business Analyst (with a focus on quality)**

Entry Requirements:

- A basic understanding of computer science concepts or prior experience in software development is often helpful but not always required.
- Many institutions accept high school graduates or those with a background in IT, computer science, or related fields.

Popular Tools for Software Testing:

- **Selenium:** A widely used tool for automating web application testing.
- **QTP (QuickTest Professional):** A commercial tool for functional and regression testing.
- **JIRA & Bugzilla:** Popular bug and issue tracking tools.
- **TestComplete:** A tool for automating testing of web, desktop, and mobile applications.
- **LoadRunner & JMeter:** Performance testing tools to simulate user load and measure performance.

Certifications in Software Testing:

Droit Academy also offer certifications upon completion, which could enhance your employability and skills. Well-known certifications include:

- **ISTQB (International Software Testing Qualifications Board) Certification:** A widely recognized global certification for software testers.
- **Certified Software Tester (CSTE):** A professional certification for software testing.
- **Certified Agile Tester (CAT):** For testers working in Agile environments.

