



Software Testing Course Syllabus

1. Introduction to Software Testing

- Definition and importance of software testing
- Objectives of software testing
- Overview of the testing process

2. Software Development Process

- Introduction to software development methodologies
- Waterfall model
- Agile methodology

3. Software Development Life Cycle (SDLC) Models

- V-Model
- Spiral Model
- Incremental Model

4. Role of Software Testing in Software Development

- Importance of testing in SDLC
- How testing integrates with different SDLC models
- Quality assurance vs. quality control

5. Types of Software Tests

- Functional testing
- Non-functional testing
- Regression testing
- Smoke testing
- Sanity testing
- Acceptance testing

6. Software Test Levels

- Unit testing



- Integration testing
- System testing
- User acceptance testing (UAT)

7. Software Test Design Techniques

- Black-box testing
- White-box testing
- Grey-box testing
- Equivalence partitioning
- Boundary value analysis
- Decision table testing
- State transition testing
- Use case testing

8. Software Test Life Cycle (STLC)

- Requirement analysis
- Test planning
- Test case development
- Environment setup
- Test execution
- Test cycle closure

9. Creating and Executing a Test Plan

- Components of a test plan
- Risk analysis and mitigation
- Test estimation techniques
- Test planning tools

10. Documenting Test Cases

- Test case templates
- Writing effective test cases
- Review and approval process



11. Executing Test Cases and Finding Defects

- Test execution process
- Logging defects
- Defect lifecycle
- Common defect types

12. Tracking Defects, Confirmation Testing, and Closing Defects

- Defect tracking tools
- Defect confirmation and validation
- Retesting and regression testing
- Defect closure process

13. Documenting Test Reports and Test Closure Activities

- Test summary report
- Test metrics and KPIs
- Lessons learned and process improvement
- Test closure report