# Mastering Test Design

- Learn functional, black-box test design techniques to find bugs faster
- Practice test design techniques to reinforce your new skills
- Examine experience-based testing approaches to replace ad hoc testing
- Find out when to use each test design technique for the best results

### The Practical "How To's" of Creating Test Cases

After the test plans are written, the test teams formed, and the tools selected, it's time to develop test cases and start the testing. So, what test design techniques should you use? How do you decide what tests are most important? What does a good test case look like? How can you reduce the number of tests while increasing coverage? When and how should you use white-box testing to complement black-box techniques? How can you maximize the value of exploratory testing?

*Mastering Test Design* answers these tester questions and many more while helping test analysts develop their professional testing skills and expand their personal tester toolkit of techniques.

### Hands-On Practice of Real-World Testing Techniques

In this hands-on workshop, you'll learn about and practice the most important functional, black-box testing techniques and be on your way to becoming a master test designer. The course includes student exercises covering equivalence class partitioning, boundary value analysis, decision tables, state diagrams, pair-based testing, and more.

Mastering Test Design is a great opportunity to hone your test design skills, improve your effectiveness, and increase your professionalism as a test analyst. You will leave the class with a newfound confidence for designing great test cases that find important bugs sooner.

### Who Should Attend?

This course is appropriate for both novice and experienced software testers. Developers who are expected to create test cases will find this course extremely useful. Test and development managers also can benefit from this course. A background of basic development processes and test levels is helpful but not required.

## Course Outline

**Introduction**
Where test design fits in the testing process
Elements of a good test case
Test oracles
Test case design trade-offs

**Functional—Black-box Test Techniques**
Understanding domain analysis
Domain analysis – advantages, issues and coverage
Domain based techniques
Equivalence Partitioning
Discovering and documenting partitions
Partitioning complex fields
Equivalence classes for multiple requirements
*Exercise*
Boundary value analysis

**Functional—Black-box Test Techniques (continued)**
Multi-dimensional domains
Decision tables – rules and construction
Decision tables into test cases
*Exercise*
Pair Based Methods
Combinatorial analysis and orthogonal arrays
Using pair based methods, manual and automated
*Exercise*
State-transition diagrams and tables
Terminology and key concepts
Chow's N-switch coverage rules
Designing tests from state diagrams and tables
*Exercise*

**Experience Based Test Techniques**

Analyzing and testing boundaries
Challenging boundary issues
*Exercise*

Error guessing
Checklists and Taxonomies
Attack-Based Testing
Exploratory testing
Defect-Based Test Design