

- Develop dynamic test strategies to reduce product and project risk with effective testing
- Learn a flexible and adaptable approach for testing any software
- Discover the keys to risk-based test planning and how to establish realistic testing goals
- Identify, analyze, and prioritize test objectives to guide all testing activities
- Focus test designs on finding important bugs more quickly and with less effort
- Find out how to report testing results and use this information to improve your testing processes

## A Risk-Driven Test Process for any Software Development Lifecycle

Whether you are new to testing or looking for a better way to organize your test practices and processes, understanding risk is essential to successfully testing software in today's ever-changing world. This course describes a general risk-based framework—applicable to any development lifecycle model—to help you make critical testing decisions earlier and with more confidence.

The key is deciding how to focus your testing effort, what elements and areas to test, and how to organize test designs and documentation. Learn the fundamentals of risk identification, analysis, and the role testing plays in risk mitigation. Learn how to develop an inventory of test objectives to help prioritize your testing efforts and translate these objectives into a concrete strategy for designing and developing tests. With a prioritized inventory and focused test design and architecture, you will be able to focus your test case creation on those areas essential to your stakeholders.

Execution of the resulting tests and assessing results based on risk-based processes will provide a better understanding of both the effectiveness of your testing and the potential for failure in shipped software. Take back a proven approach to organize your testing efforts and new ways to add more value to your project and organization.

## Focuses on the Most Important Testing Issues

In a small-group class setting, your instructor, a seasoned testing expert, will help answer your tough testing questions and help you understand how to apply risk-driven testing to your specific situation. You'll leave equipped with a practical and proven testing approach that you can adapt to your organization, development lifecycle, applications, and project for immediate benefit. As a tester, you'll be equipped with the tools and skills to attack any testing project—no matter the context or scope.

## Who Should Attend?

The audience includes test professionals, test managers, project leaders, quality analysts, and software developers. No specific prerequisites are assumed. However, attendees are expected to have some software experience.

## Course Outline

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### Chapter 1 – Testing and Risk

- Focus of testing
- Complete/exhaustive testing Is impossible
- Risk management — overview
- Software risk areas
- Understanding process risks
- Understanding project risks
- Understanding product risks
- Categorizing risk

### Chapter 3 – Product Risk (continued)

- Risk mitigation
  - Determining the mitigation strategy
  - Risk mitigation – approaches
  - Risk mitigation – strategic issues
  - Product risk mitigation – scope
  - Utilizing risk Information

### Chapter 4 – Utilizing Product Risk – Test Design

- Determining the scope of testing

Attitudes and viewpoints relating to risk  
Key elements of risk-driven testing

## **Chapter 2 – Project Risks - Test Planning**

Deciding on a test plan  
Test planning – key elements  
Division of the testing effort  
  Developer testing (component and component integration)  
  System testing  
  Acceptance testing  
Staffing decisions and choices  
Managing regression testing  
The regression decision  
Defining the testing scope  
Deliverables and tasks  
Environment — concerns and issues  
Tools and automation – benefits and risks  
Schedule, estimation and budget  
Approvals (sign off on Plan)

## **Chapter 3 – Product Risk (Identification, Analysis, Mitigation)**

Risk identification  
  Risk identification techniques  
Risk analysis  
  Risk-Driven test analysis  
  A product risk analysis model  
  Risk analysis activities  
  Creating an Inventory  
  Applying the inventory process  
  Risk analysis and prioritization  
  Primary risk characteristics – impact and likelihood  
  Approach to risk analysis  
  Adjusting the testing

Approaches to test design  
  Selecting the test approach  
  Formal test design  
  Informal test design  
  The test design process  
  Organize the test objects  
  Example test set definition  
  Test techniques and risk

## **Chapter 5 – Execution, Reporting, and Reassessing Risk**

Test execution and risk – key elements  
Testing status  
Test effectiveness issues  
Test execution issues  
Test execution and failure  
Categorizing defects  
Coverage assessment  
Reporting testing status  
Assessing defect status  
Stopping the testing

## **Chapter 6 – Wrap Up**

Summary  
The key to success  
Course evaluations  
Bibliography — books  
Bibliography — articles and papers