

Overview of Software Testing Training

Our Focus

Test and Data Services specialises in software testing. This single-minded commitment to be the best in one specific field has made us the leader in the South African software testing market. Over the next few pages the company will showcase the training courses on offer.

Software Testing Training

Test and Data Services presents courses at several well-established training facilities throughout South Africa and internationally. Training can be arranged at the client's premises depending on adequate facilities and candidate numbers. The company's commitment to education does not stop with these training courses. Once back in the work environment, the company's consultants are available to assist the student to apply these principles should the need arise.

Test and Data Services offers a wide selection of software testing courses. These range from beginners courses to specialist courses (such as International certification, test automation and usability). The courses also vary in duration from one to five days. The courses currently offered are:

Type	Course Name	Course Days
Fundamentals	Practical Software Testing <ul style="list-style-type: none"> • A theoretical framework of the fundamentals of software testing. • Practical implementation of software testing techniques. • Testing management issues. • Guidelines on how to improve testing effectiveness in the work environment. 	3
Developers	Software Testing Overview for Developers <ul style="list-style-type: none"> • Based on the Practical Software Testing course, important testing techniques that will be of value to developers are covered. • Developers will learn how to reduce errors upstream and therefore be more productive and have less maintenance to do. 	1
Managers	Software Testing Overview for Managers <ul style="list-style-type: none"> • Valuable insights into the discipline of software testing are imparted. • Management highlights of testing best practice from the more detailed three day Practical Software Testing course are presented. 	1
Intermediate	Practical Software Testing Advanced <ul style="list-style-type: none"> • Skills gained: <ul style="list-style-type: none"> • Testability • Use Cases • Exploratory Testing • Error Model Testing • Pairs Testing • Thinking Hats – Thinking About Testing • Structural Testing • Data Flow Testing • State Transition Testing • Data Warehouse Testing • TPI 	3

Type	Course Name	Course Days
Intermediate	Business Analysis and Requirements Engineering <ul style="list-style-type: none"> Project failures in software development are directly related to poor requirements processes and practices. This course provides an analyst's view of requirements engineering. Techniques covered to equip analysts include: <ul style="list-style-type: none"> Requirements elicitation Requirements analysis (data flow diagrams) Requirements specification Requirements verification Requirements management 	5
Automation	Software Test Automation Architecture <ul style="list-style-type: none"> This course will help test automators to select the correct testing tool for their environment and implement the most appropriate architectural solution for the current and strategic needs of the business. The course is based on current world best practices in test automation architecture. 	2
Automation	Practical Automation Scripting for Testers <ul style="list-style-type: none"> This course explains the theoretical framework and practical techniques for test automated execution tool scripting. It teaches how to develop automation scripts according to best practices, with practical hands-on scripting training on a selected automation tool. This course covers the following areas: <ul style="list-style-type: none"> Context of Test Automation Scripting Developing Automated Test Scripts Visual Basic Scripting Scripting in Automation Frameworks Using Automated Tool Features Research and Development Tool Specific Practical Training 	3
Automation	Practical Automation Scripting for Testers Advanced <ul style="list-style-type: none"> Learn how to apply Visual Basic Scripting skills on specific test automation execution tools, e.g. QuickTest Professional and TestPartner. This course covers the following areas: <ul style="list-style-type: none"> Using Automated Tool Features Scripting in Automation Frameworks 	3
Fundamentals	Performance Testing Fundamentals <ul style="list-style-type: none"> This course explains the fundamentals of performance testing throughout the software development life cycle (SDLC). The course covers the following areas: <ul style="list-style-type: none"> Performance Testing Life Cycle Performance Test Planning Performance Test Design Performance Test Preparation 	1
Fundamentals	Security Testing Fundamentals <ul style="list-style-type: none"> This course explains the fundamental theoretical framework and practical techniques for security testing. It teaches how to identify security vulnerabilities according to best practices. The course covers the following areas: <ul style="list-style-type: none"> Overview of Security Testing User Interface Attacks Competitive Intelligence Scouting Privilege Testing, Containment Testing and Password Cracking Google Hacking 	

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Agile	Agile Testing <ul style="list-style-type: none"> This course provides candidates with the knowledge of testing activities and roles in Agile development teams. It identifies testing interventions supporting Agile methods and how testers can add value through these interventions. The course covers the following areas: <ul style="list-style-type: none"> Introducing Agile, Extreme Programming (XP) and SCRUM (these will form the backbone of the course) Levels of Testing in Agile - Iteration and Integration (regression) User stories – defining “done” User stories – estimating test effort Quality criteria and owning quality Demonstrations as “tests” Integration – testing the iterations, release and regression coverage Defect tracking in Agile using the SCRUM board Attitude – being a member of an Agile team Helping developers with tests, helping product owners with “done” 	1
Fundamentals	Practical Usability Testing <ul style="list-style-type: none"> Introduction to usability and usability testing techniques. Incorporate usability testing into the development life cycle. The User Centred Design Life Cycle. Practical testing techniques (with and without users). Real-world examples of usability technique application. 	2
Fundamentals	User Acceptance Testing <ul style="list-style-type: none"> Where do I start? What do I do? When do I stop? The course objective is to provide answers to the following questions and more: <ul style="list-style-type: none"> What is UAT? Why should I do UAT? Can I use the software to do my job? What must I test? How do I test? How do I understand the ‘techies’? How do I get better at UAT? 	2
Fundamentals	Basic Practical SQL for Testers <ul style="list-style-type: none"> This course could have been called "The least a tester should know about databases." Aimed at the database novice, this course starts with the basics of databases. Introduces the tester to structured query language. Instructs in how a tester can employ database queries to effectively enhance testing. 	2
LEAN	Introduction to LEAN Culture and Techniques in IT and Testing <ul style="list-style-type: none"> LEAN manufacturing has surpassed mass production techniques with higher quality, reduced costs and faster time-to-market. Skills gained: <ul style="list-style-type: none"> An overview of LEAN's origins in Toyota where candidates learn behaviour that support LEAN's emphasis on continuous improvement. An opportunity to get familiar with key LEAN techniques including value stream analysis and mapping, measurement of cycle time, standard work, flow and pull, voice of the customer and visual management. A comparison of LEAN versus Agile and more traditional software development practices, with guidelines of how to benefit from LEAN practices in both environments. A brief discussion on LEAN and Six Sigma. A hands-on experience from an interactive manufacturing exercise. 	1

Type	Course Name	Course Days
Productive Teams	<p>Productive Teams for IT and Testing</p> <ul style="list-style-type: none"> • Business, IT and testing are all best carried out as team endeavours. By attending this course, candidates will learn their individual natural strengths and learn how to support the rest of their team members by using these strengths to best advantage. • Peers and managers will benefit from knowing how to bring the best in each other by understanding how the others typically think based on their strengths profile and what they like or dislike with respect to interactions. • After completing this course candidates will: <ul style="list-style-type: none"> • Know their own top five strengths or talents and those of their colleagues. • Know their characteristic team behaviours and those of their colleagues. • Put this self-knowledge to work at increasing team engagement, productivity and morale. 	2
International Certification: A Certificate will be issued by the BCS on successful completion of the course.	<p>ISTQB/ISEB Foundation Certificate in Software Testing</p> <ul style="list-style-type: none"> • Teaches excellent testing practices no matter which development model is used. • The course covers the fundamental skills required by all software testers. • The following is covered: <ul style="list-style-type: none"> • Fundamentals of testing • Testing throughout the software development life cycle • Static techniques • Test design techniques • Test management • Tool support for testing • Successful staff completion of the Foundation Certificate in Software Testing gives employers a competitive advantage, since they can legitimately assert that people trained according to international standards have tested their software. 	3 plus a 1 hour exam
International Certification: A Certificate will be issued by the BCS on successful completion of the course.	<p>ISEB Intermediate Certificate in Software Testing</p> <ul style="list-style-type: none"> • This qualification bridges the gap between foundation and practitioner levels and addresses the need for the candidate to adopt a different approach in thinking than that required at foundation level. • Prerequisites: ISTQB/ISEB Foundation Certificate in Software Testing 	3 plus a separate day for the exam
International Certification: A Certificate will be issued by the BCS on successful completion of the course.	<p>ISEB Practitioner Certificate in Test Analysis</p> <ul style="list-style-type: none"> • Enabling testing practitioners to gain professional recognition for advanced level skills in the technical and analytical aspects of testing. • Prerequisites: ISEB Intermediate Certificate in Software Testing 	3 plus a separate day for the exam
International Certification: A Certificate will be issued by the BCS on successful completion of the course.	<p>ISEB Practitioner Certificate in Test Management</p> <ul style="list-style-type: none"> • Enabling testing practitioners to gain professional recognition for advanced level skills in the managerial aspects of testing. • Prerequisites: ISEB Intermediate Certificate in Software Testing 	3 plus a separate day for the exam

Type	Course Name	Course Days
International Certification There is no exam at the end of this module, but we will provide practice exams for all ISTQB Advanced Level qualifications.	ISTQB Advanced Level Certification in Software Testing - Advanced Core Module <ul style="list-style-type: none"> • Application of the generic test process to various projects • Determining relevant factors to influence exit criteria • Adopt a risk based approach to testing • Learn how to enhance your own incident management process • Establish better ways of communication • Prerequisites: ISTQB/ISEB Foundation Certificate in Software Testing 	2
International Certification	<ul style="list-style-type: none"> • ISTQB Advanced Level Certification in Software Testing - Advanced Test Manager Module • Understand the various lifecycles and how to apply them effectively • Create a firm foundation for the success of testing in your organisation • Estimate, plan, monitor and control testing on any project • Understand how to manage distributed, outsourced and insourced test resources • Build effective and highly-motivated test teams • Understand and apply test process improvement models • Prerequisites: Delegates wishing to take the ISTQB Advanced Test Manager Certificate must hold the ISTQB/ISEB Foundation Certificate and have completed the ISTQB Advanced Level Core Module. If you wish to sit the course without taking the exam, there are no prerequisites. 	3 plus a separate day for the exam
International Certification	ISTQB Advanced Level Certification in Software Testing - Advanced Test Analyst Module <ul style="list-style-type: none"> • Ability to evaluate requirements to determine domain validity • Identify and choose appropriate test design techniques for different applications • Understand the differences between test conditions, test cases, test procedures and test scripts and identify when to produce them or not. • Produce good quality test design specifications using the most effective test design techniques • Apply suitable techniques to test quality characteristics such as performance, reliability, accessibility and usability. • Prerequisites: Delegates wishing to take the <i>ISTQB Advanced Test Analyst Certificate</i> must hold the <i>ISTQB/ISEB Foundation Certificate</i> and have completed the <i>ISTQB Advanced Level Core Module</i>. If you wish to sit the course without taking the exam, there are no prerequisites. 	3 plus a separate day for the exam

Type	Course Name	Course Days
International Certification	ISTQB Advanced Level Certification in Software Testing - Advanced Technical Test Analyst Module <ul style="list-style-type: none"> Identify and choose appropriate test design techniques for different applications Ability to analyse internal system structure in sufficient detail to meet expected quality levels Understand the differences between test conditions, test cases, test procedures and test scripts and identify when and when not to produce them. Understand and use appropriate functional-based, structural-based, defect-based and experienced-based test design techniques. Evaluate and apply suitable techniques to test quality characteristics such as performance, reliability, accessibility and usability. Gaining knowledge of static and dynamic analysis and the tools that support them. Application and use of keyword-driven scripting techniques for automated testing. Prerequisites: Delegates wishing to take the <i>ISTQB Advanced Technical Test Analyst Certificate</i> must hold the <i>ISTQB/ISEB Foundation Certificate</i> and have completed the <i>ISTQB Advanced Level Core Module</i>. If you wish to sit the course without taking the exam, there are no prerequisites. 	3 plus a separate day for the exam

Our Testing Services

Test and Data Services offers three primary services:

- Testing Implementation Solutions
- Consulting
- Training

Contact

Further information on our training or services can be downloaded from www.testdata.co.za or contact us at the telephone numbers below.

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