

Course Name :	Diploma in Software Testing 2.0 (HP)	
Duration : Class room: 108 Hrs.	Product Code : ST-ST-50009	
<p>This course offers an exhaustive coverage of Software Testing concepts and its use in Testing of real time projects. Provides hands on with leading testing tools like HP QC, QTP, LoadRunner. It includes exposure to application lifecycle management.</p>		
Take Away: After completion of this course you will be able to		
<ul style="list-style-type: none"> • Perform effective testing of Software applications. • Use leading Testing tools like HP ALM (QC), HP UFT (QTP), HP LoadRunner, HP Performance center etc. • Make yourself prepared for HP ATP certification on software testing foundation. 		
<ul style="list-style-type: none"> • Build career in the field of Software Testing. 		
Unique Features		
<ul style="list-style-type: none"> • Designed to enhance employability by aligning course to industry expectations in terms of manual testing expertise and exposure to leading automation tools like HP ALM (QC), HP UFT (QTP), HP Load Runner and VUgenerator • Develop strong foundation of Software Testing concepts & methodology • Product design based on International ISD standards • Leveraging partnership with HP to ensure availability of latest tools knowledge to students from HP certified trainers 		
Target Audience		
<ul style="list-style-type: none"> • Graduates and Post-Graduates • Job aspirants 		
<ul style="list-style-type: none"> • Working professionals looking forward for testing as a career 		
Pre-requisites: What should you know before attending this course?		
<ul style="list-style-type: none"> • Operate Computers • Knowledge of Basic 'C' Programming would be an added advantage 		
Recommended Next Course		
<ul style="list-style-type: none"> • Advanced QTP 		
Reference Books	Courseware	
<ul style="list-style-type: none"> • QTP Unplugged by Tarun Lalwani • Lessons learned in Software Testing- Kem Kaner 	<ul style="list-style-type: none"> • Manual Testing courseware • HP tools study material 	
Training Methodology		
<p>This course uses the standard SEED training methodology (based on International ISD standard) of</p> <ul style="list-style-type: none"> • Visualization of concepts • Applying learned concepts for testing of real time project • 100% hands-on exercises/case studies 		

Manual Testing Theory	
Manual testing theory sessions cover entire testing lifecycle activities along with detailed insight into software application components, development process and software quality attributes. This session also focuses on techniques, tools and skills needed by a student to be a good tester.	
Objectives : You will learn	
<ul style="list-style-type: none"> • Manual Testing concepts and techniques • Testing types & Test methods • Non functional testing types • Test execution, defect management and test case management 	
Configuration and Tools Requirements	
<ul style="list-style-type: none"> • Microsoft Office 2007 	
Course Contents	
Introduction to software applications	Software application uses and advantages, application components and characteristics, Introduction to application domain, architecture, Types of applications
Introduction to Software development process	Software development lifecycle(SDLC) activities, phases and deliverables , Project team roles and responsibilities,
Need of testing	Challenges in development phases, Introduction to software defects, Need of Software Testing,
Software Testing methods and levels	V model, methods of testing – Verification and validation, static and dynamic testing, Levels of testing – Unit, Integration, System and use acceptance testing, approaches for integration testing, concept of stubs and drivers, Challenges and best practices in software testing
Test Planning	Software testing lifecycle (STLC) activities, phases and deliverables, testing team roles and responsibilities, Test plan creation, Test plan template, Introduction to BBT & WBT concepts
Test design process	Requirements study, creation of test scenarios and test cases, creation of test data, requirement traceability matrix (RTM), test case management, best practices of test case design, common mistakes, test case review
Test Design techniques	Black box testing techniques – Equivalence class partitioning, boundary value analysis, error guessing, state transition, Negative testing
Test Execution	Test execution entry criteria, smoke and sanity testing, test execution cycles, when to stop testing, Retesting & Regression Testing, test closure process, test summary report
Defect Management	Types of defect, defect report attributes, defect management system and process, defect life cycle
Non functional testing	UI and usability, Accessibility, localization, performance – load, stress, endurance and volume, security, installation, configuration and compatibility
Specialized testing	Introduction to White box testing, data base testing
Quality	Concept and definition of quality, Software Quality attributes, Quality management system (QMS), Quality Assurance (QA), Quality control (QC), Introduction to software testing metrics
Skills needed for software tester	Technical skills, behavioural skills, career path

Manual testing Project	
After learning theory of manual testing, a detailed hands-on experience of project execution is provided through project module. It resembles the real life scenario of end to end test project execution.	
Objectives : You will learn to	
<ul style="list-style-type: none"> • Read SRS and understand application functionalities. • Identify scenarios & develop Test cases based on the same. • Execution of test cases & Defect reporting. • Post mortem review. 	
Configuration and Tools Requirements	
<ul style="list-style-type: none"> • Browser - Mozilla Firefox / IE 7 and above • Project executable or access to project test website (VPC to be created) • Microsoft Office 2007 and above 	
Course Contents	
Requirements study Hands on	Study of SRS, Knowledge transition from Test manager, Query resolution session
Test planning Hands on	Understanding test plan, test case templates, team set up,
Test design Hands on	Creation of test scenarios, module level and integration test cases, test data, review and by test manager, creation of RTM
Test execution Hands on	Test environment set up, test execution, defect logging and defect review meetings, adhoc testing
Test closure Hands on	Creation and presentation of test summary report, experience sharing, Preparing for interview questions related to project

Introduction to HP ALM (QC)	
This session provides insight into the application lifecycle management using HP ALM (QC). The focus is on managing the test life cycle activities using Quality Centre features.	
Objectives : You will learn to	
<ul style="list-style-type: none"> • Learn how to manage testing activities throughout SDLC. • Manage requirements in HP QC (ALM). 	
<ul style="list-style-type: none"> • Create releases, cycles, manual and automated test sets in HP QC (ALM). 	
<ul style="list-style-type: none"> • Execute test sets, upload and track defects in HP QC (ALM). 	
<ul style="list-style-type: none"> • Create reports necessary to understand project status and health. 	
Configuration and Tools Requirements	
<ul style="list-style-type: none"> • HP ALM – 11.0 • Core 2 Duo processor, 4 GB RAM, Microsoft Office 2010 	
Course Contents	
HP ALM Basic	What is ALM, Features of ALM 11.5, Common usage models
Working with releases	Relationships between application, releases, cycles, create release tree, assigning requirements to releases, assigning tests to release and cycles.
Test Planning	Organize test plans, requirement coverage, analyze & track cycle
Lab Management, Test execution	Concept of Lab, manage lab resources, Schedule and execute tests, Perform continuous deployment with ALM, Create and organize folders in a test sets tree, View all test runs for a project, Create test sets, Manage test execution flow and test dependencies, Execute manual and automated tests,
Defect Tracking	Log defects, Search and review defects, Track defects throughout their lifecycle Associate defects with entities
Version Control	Describe version control functionality, Check out entities, Check in entities, View version history, Compare versions, Promote an older version
Reporting & Analysis	Generate reports and graphs, Analyze reports and graphs, Create and view Project reports, Generate formatted project documentation and Excel reports Share graphs that you can open without the ALM client, Identify the features of the Dashboard, Create Dashboard folders and pages, Configure the Dashboard View a Dashboard page

Fundamentals of HP UFT (QTP)	
This session enables students with test automation skills by providing inputs on automation concepts and hands on experience of creating automated scripts using HP QTP.	
Objectives : You will learn to	
<ul style="list-style-type: none"> • Record & Playback tests. • Create basic automated tests from manual test cases. • Use Object Repository. • Enhance basic test with synchronization. • Apply verification using standard checkpoints. • Use debugging tool to trouble shoot the tests. 	
Configuration and Tools Requirements	
HP UFT (QTP 11.5)	

Course Contents	
Introduction to QTP	Why automation, scope of automation, Test Automation process, Guidelines, , Introduction To QTP, Recording Modes.
Features	Record & Run settings, Recording Modes, Record & Playback Mechanism. Use of Active Screen, Synchronization and its usage, Insert Wait property, Checkpoints, Check Point & Types of Checkpoint, Standard Checkpoint , Bitmap Checkpoint, Text Checkpoint, Database Checkpoint, Data Driven Test, Parameterization Methods, Output values, User Defined Functions
Enhancements	Actions, What is Action, Reusable & Non Reusable Actions, Call to Existing action, Call to Copy of Action, Repository Types, Recap Of What is Object Repository, Repository types , Differences between repository modes

Virtual User Generator for Load Testing	
This session provides inputs on load testing scenarios by creating testing scripts and generating virtual user load.	
Objectives : You will learn to	
<ul style="list-style-type: none"> Record scripts and create transactions to be used for load testing . 	
Course Contents	
Introduction to VU	Record and replay scripts in the web environment using VuGen
Working with transactions	Create transactions, Measure steps and business processes using transactions, monitor transactions
Parameterization	Parameterize the steps using various user inputs, understanding reasons to parameterize
Correlation	Correlate scripts to process server-generated data, manual co relation, automatic co relation

Fundamentals of HP Load Runner 11.0	
This session provides exposure to executing and monitoring performance testing through usage of HP LoadRunner tool.	
Objectives : You will learn to	
<ul style="list-style-type: none"> Design, schedule and execute load test scenario. Configure Load test by uploading user scripts & scheduling. Adding monitor profiles and SLA's . Using Lab management, reports and dashboard. 	
Configuration and Tools Requirements	
<ul style="list-style-type: none"> HP LoadRunner 11.5, Mozilla FireFox browser 	
Course Contents	
Load Runner introduction	Components of Load Runner, V user script generator, load generator, analysis
Scenario management	Generate manual scenario, create goal oriented scenario, execute scenario
Configuration with VU	Adding monitor profiles and SLA's
Configure Performance Monitors	Setting up AUT host Topology and configuring Sitescope monitors
Lab Management	Understanding of lab management, working with lab management, monitoring

	load tests using lab
Reports, Analysis	Configure Time slot and run a load test and use project Dashboard, Analysis of graphs, graphs co relations.