



Quality-One International

DVP&R Course Outline

- Introduction to Design Verification Planning and Report (DVP&R)
- Benefits of a Test Plan
- How DVP&R Supports the Product Development Process
- DVP&R Development Model (Three-Path Approach)
- Using the Systems Engineering “V” Model
- Path 1: Inputs into the Test Plan
 - Family Test Plan
 - Requirements and Specifications
 - Past Warranty Concerns
 - Parameter (P) Diagram / Noise Factors
 - Design FMEA
 - Key Life Tests (KLT)
- Path 2: Test Plan Development
 - Setting Reliability Targets
 - Investigating Past Data (DNA) / Leveraging Knowledge
 - Computer Aided Engineering (Role in Test Planning)
 - Physical Testing Components / Subsystems / Platforms
 - Legacy Capture
- Path 3: Testing and Analysis
 - Setting Reliability Targets
 - Sample Size Considerations, Engineering Judgment & Delta / Scientific Analysis
 - Using Surrogate Test Data to Reduce Sample Size
 - Leveraging Known Benchmark Approaches to Reduce Sample Size
 - The Role of CAE / FEA in Selecting Sample Conditions
- Documenting the DVP&R
- Prototype Control Plan Methodology
- Testing Process
 - Demand Stresses vs. Capacity of Design
 - Bogey Testing
 - Life Testing
 - Degradation Testing
 - Introduction to Weibull Analysis
 - Accelerated Testing Methodology
- DVP&R Test Results & Lab Reports
- Other DVP Techniques: Test Plan Matrix